2011

Graduate Medical Education 2010-2011 Annual Report

Children's Mercy Hospital

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Recommended Citation
Children's Mercy Hospital, "Graduate Medical Education 2010-2011 Annual Report" (2011). GME Annual Reports. 3.
https://scholarlyexchange.childrensmercy.org/gme_annual_reports/3

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Dear Friends,

Children’s Mercy has a long and proud history as an academic medical center, training generations of new pediatricians and pediatric subspecialists throughout the years to provide outstanding medical and surgical care for the children of our region and our nation. Each year we add new programs and new enhancements to our graduate medical education program. We hope you will take a few moments to read this GME report to learn more about the great strides we are making in preparing the physicians who will provide care for the children of tomorrow.

We have often referred to Children’s Mercy as being similar to a “three-legged stool,” with our programs built on the three major components of education, clinical care and research. Our GME programs expose the medical students, residents and fellows who train here to all three of those “legs” in pediatric medicine, giving them access to state-of-the-art health care and pioneering medical research as they pursue their medical education.

We are exceptionally proud of the care that is provided to patients by our residents and fellows every day here at Children’s Mercy, and of the high-quality care that is provided to children throughout our region and the nation by the pediatricians and subspecialists who received their training here. Our graduate medical education programs are committed to continuing that tradition of quality and excellence for the physicians and children of the future for many years to come.
We hope that this report serves as a resource for you to learn about the depth and breadth of Medical Education programs at Children’s Mercy Hospitals and Clinics.

This past year, Children’s Mercy was honored as one of the best children’s hospitals in the country by U.S. News and World Reports in all 10 specialties surveyed. These 10 specialties are just the tip of the iceberg. We have outstanding physicians and surgeons across all our subspecialties, and we are proud to have their support in providing education, clinical care and research opportunities for our medical students, residents, and fellows.

Our education programs are flourishing, and today there is more interest than ever in our fellowship programs, residency program and in our opportunities for medical student electives and subinternships. Our residency program graduates continue to have board passage rates well above the national average, and our pediatrics clerkship remains one of the most highly rated by students from the UMKC School of Medicine.

As you will see in this report, the vision and commitment of Children’s Mercy leadership to advancing pediatric medicine is strong and extends throughout the hospital, providing opportunities for our fellows, residents and medical students to pursue their interests academically, clinically and through research.

“A teacher affects eternity; he can never tell where his influence stops.”

- Henry Brooks Adams
At Children’s Mercy Hospitals and Clinics, we start at the beginning when it comes to defining excellence in pediatric medicine.

We take pride in training the next generation of pediatric specialists and researchers with lessons and techniques not practiced in other pediatric hospitals. Partnering with the University of Missouri-Kansas City School of Medicine, we emphasize the importance of preparing our residents and fellows to be the best in their field, redefining pediatric medical education with every step.

“Our faculty is committed to the practice of evidence-based medicine that focuses on the art of patient- and family-centered care,” says Dr. Jane Knapp, Chair, Department of Graduate Medical Education; Associate Chair of Pediatrics; Associate Dean, UMKC School of Medicine; Professor, UMKC School of Medicine. “Our residents and fellows are taught to incorporate this mindset within every specialty and clinic at the hospital, building on the traditional strength of the Medical Education program.”

> Received approval to launch our first pediatric cardiology fellowship, the only fellowship of its kind in the region. Through this program, fellows are exposed to a variety of normal and abnormal cardiovascular conditions in the region’s leading pediatric cardiac center - an experience that is certain to produce highly skilled pediatric cardiologists who will help meet the increasing needs of a growing population of children diagnosed with congenital heart conditions.

> Received approval for accreditation or reaccreditation for fellowships in Developmental and Behavioral Science, Psychology, Child Neurology, Otolaryngology (ENT), Critical Care, Gastroenterology, Radiology and Pediatric Dentistry - totaling 25 subspecialty fellowship training programs housed at Children’s Mercy.

> Developed the Continuous Quality and Practice Improvement course for fellows, an interactive, mentor-led learning experience that is designed to provide trainees with the skills and knowledge to continue to improve the quality and productivity of patient and clinical care.

> In 2010, Children’s Mercy Hospitals and Clinics offered 471 programs worth 1,155 continuing medical education credit hours to 7,525 physicians. In addition, 10,367 other health care professionals also attended and benefited from these educational programs, for a total of 17,892 attendees.

> Expanded our Library Services staff and added new resources to enhance the overall value of the Health Sciences Library and the Kreamer Resource Center for Families.

> Received reaccreditation from the Accreditation Council for Graduate Medical Education (ACGME) as an Institutional Sponsor for Graduate Medical Education programs.

> Presented workshops at national education and scientific conferences.

> Introduced two awards to recognize excellence in medical student education: the Herbert A. Wenner, MD, Award for Faculty Excellence in Medical Student Education and the Barbara Allphin Residents as Teachers Award.

> Implemented an Advocacy Lecture series for residents.
“Our residency program graduates continue to excel with board passage rates well above the national average and lifelong skills that transition well whether it’s a move into private practice or pursuit of a pediatric specialty. At Children’s Mercy, we are changing how residents and fellows are taught by exposing trainees to personalized medicine, genomics, research and new treatments that put them at the forefront of how care is provided and, ultimately, preparing them to be leaders in redefining pediatric medicine.”

~ Dr. Knapp
RESIDENCY PROGRAM
Welcome to the Department of Pediatrics at the University of Missouri-Kansas City and The Children’s Mercy Hospital. We are delighted that you are interested in learning more about our Residency Program. Our website links provide specific information about our training program, Children’s Mercy Hospital, and the vibrant Kansas City metropolitan area. We are proud to showcase our extraordinary and comprehensive clinical care, dedication to the education of students, residents and fellows, and our world-class research programs.

Our outstanding medical, surgical, nursing, and patient/family support services span the full spectrum of pediatric care. The consistently high rankings we receive on national benchmarks attest to the exceptional quality of care we provide. Our 317-bed hospital has been recognized by the American Nurses Credentialing Center with Magnet designation for excellence in nursing services and ranked by U.S. News and World Report as one of “America’s Best Children’s Hospitals.” Our faculty of nearly 400 pediatric specialists and subspecialists care for patients in the inpatient setting and in more than 40 pediatric subspecialty clinics. We operate the only Level IIIc intensive care nursery and the only Level I pediatric trauma center in a 200-mile radius of Kansas City.

We are dedicated to excellence in the education of medical students, residents, and fellows, as reflected by a competency-based curriculum designed to provide practitioners with comprehensive knowledge and outstanding skills. When you graduate from our residency program, you will be fully prepared to pursue whatever career option you choose.
If you are looking for a pediatrics residency training opportunity that exposes you to a diverse patient population, an amazing array of pediatric pathology, a tremendous resident camaraderie, and a friendly and responsive faculty in a wonderfully livable city, you have come to the right place!

Children’s Mercy Hospitals and Clinics have a long history of providing compassionate, state-of-the-art care to the children of Kansas City and our surrounding region. We continue that tradition today while providing our residents with a comprehensive, thoughtful, and rewarding education that prepares them to pursue any career path they choose.

Our website highlights many of the unique experiences and features of our residency program, but it only scratches the surface. As program directors, we encourage you to get to know Children’s Mercy Hospital. Spend some time on one of our clinical rotations or come to visit us to see for yourself. We think you will like what you see!
Pertussis - whooping cough - is a commonly encountered disease within the pediatric community, but that doesn’t mean all the questions surrounding the condition have been answered.

Completing his third year of residency, Dr. Jeremiah “Jedd” Raney, decided to go beyond his clinical training to learn more about the diagnosis and treatment of this specific disease at Children’s Mercy Hospitals and Clinics. A second-generation pediatric resident at Children’s Mercy - his father, Dr. Kent Raney, completed his Children’s Mercy residency in 1982 - Dr. Jedd Raney knew he was in the right place to take full advantage of his environment and the resources provided for him through the pediatric residency program.

“As residents at Children’s Mercy, we’re encouraged by the faculty members to conduct research that ultimately benefits the way we treat our patients and prepares us for our careers post-residency,” says Dr. Raney. “Training under great mentors, we have the unique opportunity to work under conditions that foster the goal of learning how to perform research with the positive by-product of presenting your work in poster format and possibly published in a peer-reviewed medical journal.”

For this study, Dr. Raney worked under the supervision of Dr. Angela Myers, Director, Infectious Diseases Fellowship Program and an Assistant Professor of Pediatrics at the UMKC School of Medicine, to conduct a retrospective study of more than 200 laboratory-confirmed cases tested for pertussis at the hospital from 2005 to 2010.

“Infection with Bordatella pertussis continues to cause significant morbidity and mortality,” adds Dr. Raney. “We wanted to explore the burden of this disease in the Kansas City area by examining the positive testing at Children’s Mercy during the time frame.”

Dr. Raney and Dr. Myers performed a chart review to track demographics, symptomatology, presenting location, laboratory tests, imaging, treatment and vaccine status for each of the patients. The data analyzed served as the basis to compare PCR/culture results performed in the lab to patients with a physician diagnosis of pertussis.

“Through this study, we found that classic presentations, primarily in young infants, were seen and patients were treated appropriately,” adds Dr. Raney. “However, nearly half of those patients had a delay in diagnosis and vaccine status was suboptimal.”

Dr. Raney and Dr. Myers also concluded that PCR testing had a higher sensitivity than clinical diagnosis, but a poorer positive predictive value, meaning it was harder to determine the likelihood of having the disease when a positive test result was returned. Thus, the results indicated that a future study will need to focus on enhancing documentation and vaccination rates at the clinical level in this vulnerable population.

“Pertussis remains an under-recognized infection in all age groups,” adds Dr. Raney. “We confirmed that immunization is key to prevention of pertussis and that health care providers need to continue to seek out this information initially when evaluating the coughing patient.”

In fall 2011 in Boston, Dr. Raney was asked to share his findings in a poster presentation at the Infectious Diseases Society of America annual meeting.
“Training under great mentors, we have the unique opportunity to work under conditions that foster the goal of learning how to perform research with the positive by-product of presenting your work in poster format and possibly published in a peer-reviewed medical journal.”

~Dr. Raney
Dr. Emily Fox’s plans to go into general pediatrics changed during her second year in residency at Children’s Mercy when she realized her career interests had shifted to Rheumatology. Following a meeting with Dr. Jason Newland and Dr. Mara Becker through the Bringing Resident New Skills Through Research Mentoring project—a program that encourages and supports development of research skills among residents—she approached Dr. Becker, a pediatric rheumatologist, about getting involved in a project.

As it turned out Dr. Becker and Dr. Shui Qing Ye, Genetics and Molecular Medicine, were just starting a research project to look at the role of Nicotinamide phosphoribosyltransferase (NAMPT) - an adipocytokine or proinflammatory hormone – in Juvenile Idiopathic Arthritis. NAMPT has been identified as a pro-inflammatory mediator in many diseases among adults. Did it play a similar role in juvenile arthritis?

“The samples were already collected,” says Dr. Fox. “My role was to help think through the study, analyze and help make sense of the data, and write it up for presentation.”

The study assessed the variability of NAMPT in two gene promoter areas in a cross sectional JIA cohort and the association with treatment modality, disease severity and subtype. A total of 195 patients were included; 115 on stable doses of Methotrexate (MTx) and 80 who were not on MTx.

While they did not find any association between known genetic variations in genes encoding NAMPT and NAMPT levels, they did notice that children who had active disease had higher concentrations of NAMPT and those treated with stable doses of MTx had lower levels of NAMPT compared to those who were just receiving TNF alpha therapy alone.

“This may suggest additional unknown mechanisms in which MTX affects the innate immune system and complex pathways of cytokine induction,” says Dr. Becker. “Additionally, if there is a drug that specifically targets NAMPT, it opens the possibility of studying this potential drug target in children, which is important in a field where we have very few drugs to treat our most severely affected patients. This is one of the first times this has been investigated in children, so I think it is an exciting start.”

The research was submitted with hopes of being accepted for a poster presentation at the American College of Rheumatology. To their surprise, it was accepted for a platform presentation.

“Being accepted to the conference and working with Dr. Becker has helped me become a better abstract writer and it is helping get me involved in the pediatric rheumatology community,” says Dr. Fox. “If anyone is interested, there is a research project out there for them. Many of the faculty will go out of their way to help support and get residents involved.”

The benefits of research involvement extend well beyond the actual studies and the opportunity to present at conferences.

“The best value is encouraging investigative thinking, broadening their interest in research in addition to clinical care, because the two can be very tightly woven to advance our knowledge and our understanding of how to treat some of these rare diseases,” says Dr. Becker.
“Being accepted to the conference and working with Dr. Becker has helped me become a better abstract writer and it’s helping get me involved in the pediatric rheumatology community.”

~Dr. Fox
Children’s Mercy continues to enhance its track record of attracting the best and brightest candidates committed to excelling in their chosen pediatric subspecialty by providing them experience in pediatric education, research, administration, and clinical care.

In 2010, we had a total of 65 fellows enrolled in fellowships programs. The diverse mix of fellows included physicians from as far away as Romania, as well as many from nearby medical schools.

“The Children’s Mercy fellowship programs provide the opportunity to develop into a top-notch physician, with expertise in clinical care, academic teaching, and conducting research,” explains Dr. Jane Knapp, Chair of Medical Education, and Professor of Pediatrics, University of Missouri-Kansas City School of Medicine.

The hospital currently offers the following fellowship programs:

- Allergy/Asthma & Immunology
- Child Abuse & Neglect (Children at Risk)
- Child Neurology
- Clinical Pharmacology
- Developmental-Behavioral Pediatrics
- Neonatal-Perinatal Pediatrics
- Pediatric Cardiology
- Pediatric Critical Care Medicine
- Pediatric Dentistry
- Pediatric Dermatology
- Pediatric Emergency Medicine
- Pediatric Endocrinology
- Pediatric Gastroenterology
- Pediatric Hematology/Oncology
- Pediatric Infectious Disease
- Pediatric Nephrology
- Pediatric Ophthalmology
- Pediatric Optometry
- Pediatric Otolaryngology
- Pediatric Pathology
- Pediatric Radiology
- Pediatric Rehabilitation
- Pediatric Surgery
- Plastic & Craniofacial Surgery
- Surgical Critical Care
- Surgical Scholars

“Our fellows experience a comprehensive program that encourages them to grow, thrive, and ultimately succeed in their chosen subspecialty. As future fellowship programs will be added, Children’s Mercy will continue to be on the forefront of providing superb training for the next generation of pediatric subspecialists,” says Dr. Knapp.
“The Children’s Mercy fellowship programs provide the opportunity to develop into a top-notch physician, with expertise in clinical care, academic teaching, and conducting research.”

~ Dr. Knapp
Anne Elliott was always interested in pediatric hematology and oncology. But it was an experience with a patient during medical school rotations at Southern Illinois University that focused her interest to pediatric palliative care and hospice, an interest that she is pursuing now as a Pediatric Hematology/Oncology Fellow.

A pediatric oncology patient had multiple relapses and was being sent home on “hospice,” but there wasn’t really a pediatric hospice or home health program.

“I was very frustrated because part of me felt bad enough he had to die from this disease, but his death should have been the best possible, and I don’t think that happened due to a lack of access to care,” says Dr. Elliott, a Hematology/Oncology Fellow.

During her residency, Dr. Elliott noticed that personality or attitudes influenced who would or would not refer to hospice. The access was there, the services were there, but it was more driven by personal preferences of the physicians.

As a fellow at Children’s Mercy, Dr. Elliott decided to pursue this further.

“I’ve always been interested in barriers that exist to access palliative and hospice care,” says Dr. Elliott. “How much of the barriers come from us as providers; is it education, is it our own personal biases, is it whether the services are available?”

A review of existing literature found a study conducted in 1998 by a group of researchers led by Dr. Joanne Hilden through the American Society of Clinical Oncology. The study surveyed adult and pediatric hematologist/oncologists about their attitudes toward hospice and palliative care. The results were published in 2001 and led to a push for education for providers regarding pain management, palliation, hospice services, and making them more available.

“Enough time has passed to repeat the survey,” says Dr. Elliott. “My question is, has it made a difference, has anything changed in our attitudes and practices?”

Once approved by the hospital’s Institutional Review Board, the survey will be emailed to physician members of the American Society of Pediatric Hematology/Oncology. Reminders will be sent and a paper survey will be sent to those who don’t respond within one month. The survey is basically the same as what Dr. Hilden used, but with the language slightly altered to focus only on pediatric patients.

“My hope is that we’ve actually shown improvement and that we are utilizing resources that are more available now, and we’ve had more education and training,” says Dr. Elliott.

She also hopes the study will draw attention to the need to focus on palliative care and hospice at all levels of training for physicians - medical school, residency, and fellowship programs.

Dr. Elliott has had the support of several mentors on the project, including Dr. Shannon Carpenter, Dr. John Lantos, Dr. Serkan Toy, and Dr. Kristen Stegenga. She has also received advice from Dr. Hilden.

“For fellows, research can be a real jumping off point for the rest of their career,” says Dr. Carpenter, Hematologist/Oncologist and Associate Professor of Pediatrics, UMKC School of Medicine. “In addition to experience writing manuscripts and research protocols and applying for grants, Anne now has this connection with someone at the top of the palliative care field, and that kind of connection is invaluable.”
“How much of the barriers come from us as providers; is it education, is it our own personal biases, is it the services available?”

~Dr. Elliott
Investigating adverse drug reactions associated with the antibiotic trimethoprim-sulfamethoxazole, (TMP-SMX), Dr. Jennifer Goldman is playing a significant role in keeping Children’s Mercy at the forefront of pediatric pharmacological research.

Dr. Goldman, a fellow in the Section of Infectious Diseases who is pursuing additional training in Clinical Pharmacology, is conducting her research as part of a five-year T32 grant that Children’s Mercy was awarded earlier this year for the Children’s Mercy Collaborative Fellowship in Pediatric Pharmacology. The grant, awarded by the NIH’s Eunice Kennedy Shriver National Institute of Child Health & Human Development and totaling more than $822,000, is one of only three pediatric clinical pharmacology training grants in the nation.

“To meet the evolving demand of translating medical discoveries into useful treatments for infants and children will require a cadre of professionals formally trained in pediatric clinical pharmacology,” says Dr. Gregory L. Kearns, Chairman, Department of Medical Research and Principal Investigator for this Children’s Mercy Collaborative Fellowship in Pediatric Pharmacology T32 grant.

Over the next five years, the Children’s Mercy Collaborative Fellowship in Pediatric Pharmacology will support the training and education of up to eight physicians in Pediatric Clinical Pharmacology. In most instances, trainees such as Dr. Goldman will be individuals who are pediatricians and have also received prior training in a pediatric sub-specialty.

Leading into the project, Dr. Goldman hypothesized that the usage of TMP-SMX, an antibiotic that is effective against Staphylococcus aureus, had increased in the pediatric population treated at Children’s Mercy throughout the past decade, resulting in an increase in TMP-SMX adverse drug reactions (TS-ADR).

“We have observed a resurgence in the use of TMP-SMX in our pediatric population in the era of methicillin-resistant Staphylococcus aureus (MRSA) skin and soft tissue infections,” says Dr. Goldman. “Thus, my long-term research goal is to be able to identify pediatric patients at risk for developing adverse drug reactions to TMP-SMX and prevent them from occurring.”

Conducting the 10-year retrospective review (2000-2009) at Children’s Mercy, Dr. Goldman noted a significant increase in MRSA prevalence with a corresponding increase in TMP-SMX prescriptions.

This increase in use resulted in a rise in adverse reactions such as fever, rash, mucosal involvement, cytopenias and liver dysfunction associated with TMP-SMX. Of the 110 patients identified with TS-ADRs over the time period, 57 percent had been treated for a skin or soft tissue infection and 37 percent were hospitalized due to their adverse reaction.

With the mentorship of Steven Leeder, PharmD, PhD, Division Chief for Clinical Pharmacology and Medical Toxicology and Professor of Pediatrics and Pharmacology at the UMKC School of Medicine, Dr. Goldman will further investigate the individual risk factors associated with TMP-SMX adverse drug reactions as a comprehensive, systematic approach to this multi-factorial process is warranted.

“As TMP-SMX will likely remain a mainstay therapy for MRSA-associated skin and soft tissue infections, we need to continue to further explore the identification of phenotypic or genotypic markers placing children at risk of TS-ADRs,” adds Dr. Goldman. “Although TS-ADRs are rare, they can result in significant suffering to a patient. We hope that our research may result in prevention of these unwanted adverse reactions for the children we care for at Children’s Mercy.”
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~Dr. Goldman
The surgical fellows at Children’s Mercy Hospitals and Clinics are not only performing surgeries and attending to traumas and burns, they are finding ways to do it better – more safely and effectively – by conducting leading surgical research.

Dr. Janine Pettiford – Cunningham, who completed her surgical critical care fellowship and is now a surgical scholar, and Dr. David Juang, a former pediatric surgery fellow who recently joined the faculty as a pediatric surgeon within the Section of General Surgery, sought to improve the surgical treatment of burns in children by conducting a prospective, randomized trial that compared two of the leading treatment plans.

Training under the umbrella of the hospital’s Center for Prospective Clinical Trials within the Department of Surgery, the fellows had the unique opportunity to build on their clinical experiences and answer questions that arose at the bedside.

While training within the only designated Level I Pediatric Trauma Center and pediatric burn unit in the region, Dr. Pettiford-Cunningham and Dr. Juang had the opportunity to conduct a trial comparing two agents commonly used for the treatment of burns: silver sulfadiazine and collagenase ointment.

The study, conducted from January 2008 to January 2011, consisted of 100 patients. The patients were randomized to daily debridement with silver sulfadiazine or collagenase with the primary outcome focused on the need for skin grafting. Patients were treated for two days with silver sulfadiazine and then randomization. Debridement practices of removing the dead or infected tissue were performed daily for 10 days or until the burn was healed. And, if needed at the 10-day mark, skin grafting was performed.

“Before this trial, there was a lack of data in the pediatric population comparing the two treatment options,” said Dr. Pettiford-Cunningham. “From our study, we found that there were no differences between the two agents in clinical course, outcome, or need for skin grafting.”

Under the direction and mentorship of Dr. Ostlie, Dr. Pettiford-Cunningham and Dr. Juang submitted the paper, “Topical Silver Sulfadiazine versus Collagenase Ointment for the Treatment of Partial Thickness Burns in Children: A Prospective Randomized Trial,” to the American Academy of Pediatrics, and it was accepted for an oral presentation.

“To continue to build a strong reputation for our programs, we want our fellows to be recognized on a national level for the research and work they are doing here,” adds Dr. Ostlie. “To be accepted to present at this meeting among their peers is a great honor for Dr. Pettiford-Cunningham and Dr. Juang and for Children’s Mercy.”

Children’s Mercy established the Surgical Critical Care Fellowship Program at Children’s Mercy in 1998 with an intent to weave the clinical and patient care aspects with the research endeavors of the Department of Surgery. Since its inception all Critical Care fellowship graduates who have taken the Surgical Critical Care boards have passed and the residents that have all desired to proceed into a career in pediatric surgery have matched into ACGME accredited pediatric surgery fellowships. The Surgical Scholars Fellowship Program, created in 2005, provides clinical research opportunities for aspiring pediatric surgeons.

“We equip our surgical fellows with the tools and resources they need to ask and answer questions regarding how to improve patient care,” says Dr. Dan Ostlie, Pediatric Surgeon, Fellowship Program Director and Professor of Surgery at UMKC School of Medicine. “Through our fellowship programs, we are preparing our trainees to be experts in pediatric surgery and emerge from our hospital as a pediatric leader.”

Dr. David Juang, Diane Rash, RN, Dr. Janine Pettiford-Cunningham and Dr. Ronald Sharp, General and Thoracic Surgery
“We equip our surgical fellows with the tools and resources they need to ask and answer questions regarding how to improve patient care. Through our fellowship programs, we are preparing our trainees to be experts in pediatric surgery and emerge from our hospital as a pediatric leader.”

~Dr. Ostlie
ADVANCED DEGREES AND CERTIFICATES
Adding a masters degree is becoming a popular trend among physicians who are looking to become experts in a specific area of health care and to add a broader career trajectory as they move from medical trainees to faculty members.

For fellows training at Children’s Mercy, the opportunity to tack on the beneficial graduate-level degree has never been simpler thanks to the Department of Biomedical and Health Informatics at the UMKC School of Medicine. Since 2009, the department has offered a Master of Science in Bioinformatics for students interested in a career in bioinformatics or clinical research. The unique degree offers students the opportunity to pursue an emphasis in one of three areas that are shaping the future of health care:

- Clinical Research
- Computational
- Genomic

“This is a traditional masters degree that allows interested fellows to really focus in on an area that will help advance their careers,” says Dr. Karen B. Williams, Chair and Professor, Biomedical and Health Informatics, UMKC School of Medicine. “We work with students to help them build beyond the cores of their respective areas.”

As part of this degree, Dr. Williams and her faculty team have been building partnerships with local health care organizations – such as Mid-America Heart Institute, Cerner, Truman Medical Center and Children’s Mercy – to have internship opportunities in place for students to move their learning beyond the classroom and into a real-world setting.

“We are providing the opportunity to get more than just classroom experience,” adds Dr. Williams. “We’re trying to really build some practical application, skilled-based experiences for them to really use throughout their professional careers.”

With the elements in place, the program, which relies on a joint collaboration between Children’s Mercy, UMKC and other area hospitals, strives to train a new generation of informatics professionals to tackle the advancements being made daily in health sciences. Subsequently, fellows graduating with this degree have the chance to become effective members of multidisciplinary teams. They will be equipped to help address public health issues, especially those related to pediatric care.

“Of course, going through a fellowship is going to provide you with really excellent clinical skills,” adds Dr. Williams. “But, it’s not going to fully prepare you if you’re in an academic environment or if you’re incorporating scholarship or research into clinical care. I think that fellows who walk out the door with extra credentials, such as this Masters degree, are more marketable in and beneficial for our changing health care landscape these days.”

Applicants have to complete the traditional application form, but those who have already obtained a graduate or professional degree from a nationally-accredited university are not required to submit scores from the GRE. For those interested in pursuing a Master of Science in Bioinformatics during their fellowship training at Children’s Mercy, a tuition-reduction program is available. To learn more about this degree program, visit www.med.umkc.edu/dbhi.
“We are providing the opportunity to get more than just classroom experience. We’re trying to really build some practical application, skilled-based experiences for them to really use throughout their professional careers.”

~Dr. Williams
Possessing clinical knowledge and skills is still a key part of medical training en route to becoming an excellent pediatrician or pediatric specialist. But, more and more, today’s physicians are being asked to split time between the bedside and the research lab, unlocking the gateways to groundbreaking discoveries that are revolutionizing the way we treat patients.

Recognizing the need to offer pediatric fellows opportunities to begin integrating research into their training, the UMKC School of Medicine offers a Graduate Certificate Program in Clinical Research.

The courses for the certificate program, offered through the Department of Biomedical and Health Informatics, can be taken simultaneously as a fellow completes specialty training.

Physicians in residency or fellowship programs are required to submit a letter of recommendation from the director of their program as well as the UMKC Graduate Admission form.

“This is a dynamic certificate program that cuts across the health care field,” says Dr. Karen B. Williams, Chair and Professor, Biomedical and Health Informatics, UMKC School of Medicine. “This certificate is a really distinct utility for someone who wants to gain a little more expertise in how to integrate clinical research into practice.”

Appealing to fellows of any specialty, the 15-credit hour course is derived from the core of the Master of Science in Bioinformatics Clinical Research curriculum and includes the following five courses:

- Biostatistics
- Clinical Research Methods
- Clinical Epidemiology
- Clinical Trials
- Overview of Health Services Research

Currently, more than 40 students are enrolled in the growing certificate program, which started at UMKC two years ago.

To learn more about the Graduate Certificate in Clinical Research program, visit www.med.umkc.edu/dbhi.
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~Dr. Williams
In 2012, the UMKC School of Medicine will launch the Graduate Certificate Program in Health Professions Education. The certificate program, open to fellows and faculty members of any specialty, focuses on helping doctors to excel in teaching.

“This certificate program will help health care professionals to develop skills in effective teaching methods, educational research, assessment, and program development and evaluation,” says Dr. Serkan Toy, Director of Evaluations and Program Development at Children’s Mercy and an Assistant Professor at the UMKC School of Medicine. “Physicians who complete the certificate program can make a change at their institutions by serving as a mentor to others in teaching and educational research. In fact, one study revealed that those physicians with effective teaching skills had better job satisfaction working at an academic-based hospital.”

The certificate program will strive to teach students how to hone skills in educational research as it links to the quality of instructional practice and evidence-based medicine. Fellows or faculty members enrolled in the program will also be exposed to resources that assist in understanding the principles of assessment and how to use these principles in health professions education to reflect student progress and promote student learning.

“Health care training programs continue to grow in all areas of this industry and educational support initiatives are following this trend,” adds Dr. Toy. “This program is based on careful examination of the needs and interests of local health professions educators.”

Children’s Mercy as a teaching affiliate of UMKC School of Medicine is helping to develop the curriculum for the health professions education program. This is one of the few programs in the nation to focus on research, curriculum development and assessment specifically designed for health professionals. In addition, fellows at Children’s Mercy who are enrolled in this certificate program can subsequently move directly into the masters program of the same name, which is set to start in the 2013 academic year.

“The Masters of Health Professions Education degree is a traditional two-year masters program that is designed to provide a rigorous educational research foundation,” says Dr. Toy. “Physicians enrolled in the program will learn how to address instructional problems and issues in health professions education.”

Based on a core curriculum in applied educational research, the 36-credit hour program focuses on the development of expertise in teaching, instructional design, program evaluation, assessment, leadership and educational research.

The first year of the masters degree is the certificate program. Children’s Mercy fellows who accept faculty positions at the hospital following their training will be able to complete the degree after their fellowships end.

To learn more about either the Graduate Certificate or Masters in Health Professions Education, contact Dr. Toy at (816) 234-3308.
“For those who want to work at a teaching hospital or assume a teaching role as a physician, this certificate program will prepare them to develop those skills.”

~Dr. Toy
Medicine is a moral profession as embodied in the Hippocratic Oath. But as medicine and medical technology have advanced during the past 40-50 years, many of the ethical discussions about medicine have taken place outside the profession.

“People who are not doctors are telling doctors how they ought to respond to difficult moral questions that arise in the practice of medicine,” says Dr. John Lantos, director of the Children’s Mercy Center for Pediatric Bioethics. “That’s really new and unprecedented.”

To help address these issues, in 2011, Children’s Mercy launched the first pediatric bioethics certificate program in the country. The certificate program is targeted to individuals with an interest in pediatric bioethics and to individuals serving no pediatric bioethics committees for children’s hospitals. Most of these individuals have an interest in, but no formal training in, bioethics.

“We promise that after a year-long primarily web based program, they would become familiar with most of the major scholarly writings in dozens of areas of ethical controversy in pediatrics and child health,” says Dr. Lantos.

Faculty for the class includes Dr. Lantos, as well as doctors, nurses, chaplains and lawyers affiliated with the hospital or the University of Missouri-Kansas City.

The course begins with an initial intensive onsite three-day session at the hospital where participants receive lectures on clinical ethics, philosophical foundations of bioethics, law and bioethics, research ethics and narrative approaches to bioethics.

The onsite session is followed by a 30-week online curriculum. Students are given each week’s reading and assignments. Throughout the week, students may participate in a class discussion board.

By the end of the year, each student is required to write a paper suitable for publication or a case analysis that would be suitable for an ethics consultation in a children’s hospital. For the final weekend of the course, participants come back to Children’s Mercy where they present their papers, then graduate.

Although participants in the inaugural class included MDs, PhDs, nurses, hospital administrators, a chaplain, a social worker, and one lawyer, Dr. Lantos sees value to fellows and residents as well.

Fellows in some specialties such as neonatology or oncology may want to take the course as part of their training for subspecialty board certification, according to Dr. Lantos, as may fellows or residents interested in bioethics as an area of research.

“Ultimately, we hope this will lead to new ways of thinking about pediatric bioethics and improvements in providing children care, both here and around the country,” says Dr. Lantos.
“Ultimately, we hope this will lead to new ways of thinking about pediatric bioethics and improvements in providing children care, both here and around the country.”

~Dr. Lantos
MEDICAL STUDENTS
As the only free-standing facility dedicated to pediatrics in the area, Children’s Mercy serves as the primary resource for the region’s medical student community.

Dr. Mohamed Radhi, a pediatric hematologist/oncologist at Children’s Mercy and an Associate Professor of Pediatrics at the UMKC School of Medicine, recognizes this role the hospital plays in providing a pediatric experience for the next generation of physicians. And, as the new Medical Student Director for Children’s Mercy, Dr. Radhi is dedicated to giving medical students a full experience as soon as they enter the program.

For him, that means getting the entire faculty involved and on board.

“We plan to emphasize that our faculty are available to be mentors for each of the medical students that do a clerkship here at Children’s Mercy,” says Dr. Radhi. “Our faculty are some of our greatest resources for these medical students and their future careers even if they don’t go into pediatrics.”

Dr. Radhi, who assumed his new role this past July, brings a passion for medical education that he developed as a faculty member at the University of Iowa. His goal is to get faculty members more involved as year-long mentors for medical students.

Here at Children’s Mercy, Dr. Radhi will ask his fellow faculty members to volunteer to match with medical students who do their two-month pediatric clerkship at the hospital. However, the mentoring partnership will not end when the clerkship is complete.

“Our faculty mentors will provide input and guidance during the medical student’s clerkship in hopes of establishing a lasting mentorship that will be of the most use for the students,” adds Dr. Radhi.

With plans to build on the success of the existing medical student program at Children’s Mercy, Dr. Radhi’s goal to integrate more faculty involvement is only one part of the overall plan he wishes to introduce to the Medical Education program.

“We’d like to start a robust feedback program between our residents and the medical students as well,” says Dr. Radhi. “The open, but structured one-on-one feedback will help residents learn to deliver feedback as well as provide another mentoring resource for the medical students.”

The mid-rotation feedback will be studied and used as a research tool to improve medical education within the hospital.

Dr. Radhi also plans to continue to expand the hospital’s simulation program, setting up pediatric cases under faculty supervision. The program will help students have experiences with cases they may only see rarely in practice.

“We want to be certain that during their two-month clerkships at Children’s Mercy, the medical students are getting as much exposure as possible to pediatric medicine,” adds Dr. Radhi. “Behind the support of more than 300 faculty members, we can provide an environment for these students to advance in their medical careers.”

To learn more about the medical student opportunities available at Children’s Mercy Hospital, contact Kristen Moore, Medical Student Coordinator, at (816) 346-1367 or by email at kmmoore@cmh.edu.
INTERNAL MEDICINE/PEDIATRICS

The University of Missouri-Kansas City Internal Medicine/Pediatrics residency program at Children’s Mercy continues to grow, much like the patients it serves.

In 2010, the combined program expanded to six residents per year, and this past year was the first to have a full complement of 24 internal medicine/pediatric residents. With the growth in residents came growth in programming. A new associate program director, Dr. Jean Carstensen, was added to assist in directing the program and to expand learning opportunities for physicians who are training in the fields of internal medicine and pediatrics.

“We are expanding unique opportunities in Med/Peds training that include growing and building our clinic, transitioning patients to adult care, and expanding our curriculum to provide multiple opportunities for residents to have a broad scope of exposures to each of the subspecialties,” says Dr. Sara Gardner, Internal Medicine/Pediatrics Residency Program Director, and Assistant Professor of Pediatrics/Internal Medicine at UMKC School of Medicine.

In February 2011, Children’s Mercy and Truman Medical Center restructured the Med/Peds Clinic to establish the Center for Family Health. The clinic is staffed entirely by Med/Peds faculty and residents.

“The clinic allows us to simulate a more realistic primary care environment for a Med/Peds trained physician,” says Dr. Gardner. “In the past, Children’s Mercy and Truman Medical Center were running two simultaneous clinics in the space (one for children, one for adults), but the schedules didn’t coordinate. This allowed us to simplify our scheduling process and open up our entire service to see families. We can see mom, dad and the kids all in one clinic visit, and not have to stagger between two different scheduling systems.”

In addition to developing the Med/Peds Faculty Practice to expand primary care services for med/peds patients, the residency program is also involved in the process of transitional care at Children’s Mercy. As a program that serves child and adult patients, the Internal Medicine/Pediatrics staff and residents are uniquely trained to help with transitioning care from pediatric providers to adult providers, according to Dr. Gardner, who co-chairs the Transitioning Care Committee with Ann Modrcin, MD, Rehabilitation Medicine.

In addition to expanding the clinical experience for residents, the program is also increasing opportunities for research. Residents are required to do research projects as part of their training.

“Every physician is a scientist at heart. We want our residents to take an academic approach to patients and their medical diseases. To do this, you must be able to ask a good clinical question and determine how to answer that question” says Dr. Gardner. “When residents graduate from our program, we want them to be able to critically evaluate the literature and apply evidence-based care in their practice. By participating in research, they learn the intimate details and importance of scientific research in their medical practice.” Adds Dr. Gardner, “Everything we do is focused on preparing the residents to be outstanding physicians, researchers and teachers.”
“We are expanding unique opportunities in Med/Peds training that include growing and building our clinic, transitioning patients to adult care, and expanding our curriculum to provide multiple opportunities for residents to have a broad scope of exposures to each of the subspecialties.”

~ Dr. Gardner
Dr. Brian Haas is interested in pursuing a career in Adult/Pediatric Cardiac Medicine following his Internal Medicine/Pediatrics residency. So when he learned of a patient with a very rare cardiac illness at Children’s Mercy, he jumped at the opportunity to be involved.

And because of the culture of the residency program and academic environment at Children’s Mercy, he was able to do just that and a little bit more.

“It is an incredible feeling to be able to say’ I really would like to participate in something’ and to get this overwhelming support saying ‘please, yes let’s do this’ and to be treated not as a student but as a colleague,” says Dr. Haas, a third-year Med/Peds resident.

Working with Dr. Karina Carlson, Pediatric Cardiologist, Dr. Haas and Dr. Heath Wilt, Meds/Peds co-chief resident, wrote a case presentation on a 10-year-old patient with coarctation of the aorta, who presented with a new diagnosis of mycotic aortic aneurysm.

“It is very unusual in pediatrics and the bacteria Streptococcus pneumoniae that caused it is very unusual as well,” says Dr. Carlson. “For both of those reasons it was pretty rare. Our patient needed emergency cardiac surgery to repair it and then subsequently did well.”

They submitted the manuscript for publication to the Journal of Congenital Heart Disease. The case was also accepted for a poster presentation at the American Academy of Pediatrics meeting and won first place. In preparation for submitting, Dr. Haas and Dr. Wilt, did background research, wrote the case report and then continued to work with Dr. Carlson to edit and refine the draft and prepare it for presentation.

“For a resident, there is a lot to learn from doing a case report all the way up to a prospective research study, to learn the process of research,” says Dr. Carlson. “I think it is good for the residents because they get involved with that process and can grow and develop that throughout their career.”

Beyond learning the research process, it is also helpful for residents who want to go into a subspecialty or apply for subspecialty training, because it shows their commitment to academic medicine and academic pursuits, according to Dr. Carlson.

“If there’s an area of interest, like cardiology, they can show programs they are applying to that they are serious and willing to commit some extra time to that.”

Dr. Haas is now in the early stages of another cardiology research project, this time with cardiologist Dr. Michael Bingler. Plus, he is working with Dr. Mary Anne Jackson, Infectious Diseases Section Chief, to mentor an intern on a research project.

“Opportunities in our program are relatively endless. We have the ability to do cutting edge bench research, clinical research, case reports… we have the ability to pursue every facet within the pediatric spectrum,” says Dr. Haas. “I’ve never met anyone at Children’s Mercy who has not been receptive to your interest, your desires, and your concerns.”
“It is an incredible feeling to be able to say ‘I really would like to participate in something’ and to get this overwhelming support saying ‘please, yes let’s do this’ and to be treated not as a student but as a colleague.”

~Dr. Haas
RESOURCES, FACTS AND FIGURES
The Health Sciences Library provides qualified medical librarians to assist with education, literature searches, reference assistance, and support for clinical, research, and evidence-based practice teams throughout the organization. The library also provides pediatric print and electronic resources to answer information needs, along with document delivery and interlibrary loan services. Print resources include approximately 4,850 print books, 260 Bradford history of pediatrics books, 500 journals (most online) and 100 CD-ROM and DVD items. The Virtual Library of online resources include 200 e-books, over 480 e-journals, multiple databases, point-of-care tools including DynaMed, UptoDate, and VisualDx, and drug references such as Lexi-Comp, Micromedex, and Medications and Mother’s Milk. These resources complement the resources at the adjacent university health sciences library.

The Kreamer Resource Center for Families is a pediatric consumer health library that provides services to the patients, their families, and the community while also supporting patient educators with information in different formats, at different literacy levels and for different developmental ages. Qualified medical librarians help patients’ families to find reliable health information and resources in words and pictures they can understand. The Kreamer RCF has both consumer health materials and recreation books for parents and children, and loans from collections of approximately 3,800 consumer health books, 3,900 recreation books, 450 videos, 45 periodicals, plus anatomical models, charts, manikins and exhibit boards. Consumer health materials focus on childhood illnesses, injuries, and disabilities, but include psychosocial support materials, special diet cookbooks, and more. Services for families include public access computers, photocopier, fax, and a small meeting space.
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HONORS AND AWARDS

Ryan McDonough, DO  Barbara Allphin Residents as Teachers Award
Laura Zapapas, MD  Barbara Allphin Residents as Teachers Award
Matthew Garrison, MD  Barbara Allphin Residents as Teachers Award
Michael Sheehan, MD  CAPS 2010 Faculty Clinical Award
Alan Clement, MD  CAPS 2010 Resident Clinical Award
Kristen McMillan, MD  Daniel Scaglotti Award, Faculty Educator of the Year
Randy Schumacher, MD  Daniel Darrow Award
Anna Schwieger, MD  Edward R. Christophersen Award
Emily Fitch Killough, MD, and Randy Schumacher, MD  Emergency Medicine Award
Sripriya Raman, MD  Fellow - Research Award – 1st Place
Bernadette Johnson, MD  Fellow - Research Award – 2nd Place
Jennifer Yuen, DO  Fellow Teaching Award
Randy Schumacher, MD  Hematology and Oncology Award
W. Scott Colliton, MD, and Maria Dycoco, MD  Herbert A. Wenner, MD, Faculty Award for Medical Student Education
Emily Fitch Killough, MD, and Kelli Udelhofen, DO  Hospital Medicine Award
Meghan Chlebowski  Laura L. Backus, MD Memorial Award for Excellence in Pediatrics
Emily Fitch Killough, MD  Mercy Award
Jessica Brunkhorst, MD  Neonatal-Perinatal Medicine Award
Pediatric Emergency Medicine Section  Outstanding Teaching Section Award
Emily Fitch Killough, MD, and Molly Uhlenhake, DO  Pediatric Care Center Award
Randy Schumacher, MD  Pediatric Critical Care Award
Mary Westfall, MD  Professor Rounds Award – 1st Place
Emily Fitch Killough, MD  Professor Rounds Award – 2nd Place
Jennifer Elzey, MD  Professor Rounds Award – 3rd Place
Judy Sebestyen, MD  Resident - Research Award – 1st Place
Tim Casias, MD  Resident - Research Award – 2nd Place
Abby Loch, MD  Clark W Seely Award
6 Henson  Nursing Unit of the Year Award
Grace Lodes, RN  Nurse of the Year Award
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HEALTH SCIENCES LIBRARY AND KREAMER RESOURCE CENTER FOR FAMILIES

(816) 234-3800 and (816) 234-3900

Brenda Pfannenstiel
Manager

Benjy Stein
Librarian

Keri Swaggart
Librarian

Andrea Wall
Librarian Technician

Andrea Wall
Librarian Technician
### Inpatient Care

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<tr>
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<tr>
<td>Average Daily Census</td>
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<td>Occupancy Rate</td>
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<tr>
<td>Pediatric Intensive Care Unit</td>
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<td>Total Patient Days</td>
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### Outpatient Visits

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### Diagnostic

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### Emergency/Urgent Care Visits

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### Surgical Procedures

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<td>Total Surgical Procedures</td>
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<td>17,782</td>
</tr>
</tbody>
</table>

### Employees

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Full-time equivalent</td>
<td>5,278</td>
</tr>
<tr>
<td>Volunteers: Active</td>
<td>930</td>
</tr>
<tr>
<td>Medical Staff</td>
<td>685</td>
</tr>
</tbody>
</table>

### Transports

<table>
<thead>
<tr>
<th>Visits</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,388</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>53</td>
</tr>
</tbody>
</table>