



# FORGING A **HIGH-RELIABILITY** ORGANIZATION

**2019 ANNUAL REPORT**



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### Forging a High-Reliability Organization

Commitment to our academic, research and clinical mission has helped UK HealthCare serve the people of Kentucky. Yet, our greatest challenge lies ahead. Five key values will guide us in becoming a high-reliability organization.

### LIVING DReCT

Diversity  
Innovation  
Respect  
Compassion  
Teamwork

### Performance Pillars

A structure for improvement supports UK HealthCare enterprise goals. These priorities are important to patients and essential to UK HealthCare's mission.

- Exceptional Clinical Care
- Safe, Effective Care
- Extraordinary Care Experience
- Efficient, Affordable Care
- Healthy Financial Performance



Robert D. Vance, Chair,  
University Health Care  
Committee of the  
University of Kentucky  
Board of Trustees

## UK BOARD OF TRUSTEES LEADING TOWARD HIGH RELIABILITY

In August 2019, fellow trustee Barbara Young and I accompanied four UK HealthCare leaders to Chicago for a meeting on the board's critical leadership role in patient safety.

Hosted by Children's Hospitals' Solutions for Patient Safety (SPS), the conference focused on hospital boards and their role in overseeing quality and safety efforts. Board training and participation are prerequisites for belonging to the SPS network.

Around the room were chief executive officers and board members from several children's hospitals. We listened and learned as leaders talked transparently about adverse events at their facilities. Some described their struggle to make the changes necessary to build a culture of safety.

Vulnerability may be unusual in a gathering such as this, but health care is unlike most industries. For the sake of patient care, we must learn from each other.

"All Teach, All Learn" is an SPS guiding principle. Members practice the same transparency with each other that is essential

for building culture, continuous improvement, high reliability and safety.

The board and executive leadership of UK HealthCare have embraced a commitment to patient safety – extending to every patient, every time. It is a lofty goal that requires a very deliberate focus on quality and safety from the top down.

I've had the fortune to chair this committee through a change in leadership at UK HealthCare and a period of growth. As my term concludes and I leave the committee in the capable hands of trustee Barbara Young, I do so with a better understanding of the challenge of safety in health care, and a greater appreciation for UK HealthCare's commitment to become a high-reliability provider. Kentucky needs and deserves no less.

Robert D. Vance  
*Chair*  
University Health Care Committee  
of the University of Kentucky Board of Trustees

### University Health Care Committee University of Kentucky Board of Trustees *As of June 18, 2019*

Robert D. Vance, Chair  
James H. Booth  
Cammie DeShields Grant  
Robert Grossman  
Barbara Young

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Eli Capilouto, ScD  
Mark F. Newman, MD  
Robert S. DiPaola, MD  
Colleen Swartz, DNP  
Frederick Zachman, MD

### Community Advisory Members

Mira Ball  
Robert Clay  
Luther Deaton  
Missy Jarvis  
John McNeill  
Nick Nicholson

**PROUD, BUT NEVER SATISFIED**  
**FORGING**  
**A HIGH-**  
**RELIABILITY**  
**ORGANIZATION**

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Mark F. Newman, MD  
Executive Vice President  
for Health Affairs

In 2018, quality, safety and value became our North Star. So, it was rewarding when our 2019 Vizient Quality & Accountability Performance Scorecard revealed significant gains in safety. Overall, UK HealthCare earned a four-star rating and a rank of 27th among most of the nation's academic health centers.

For a fourth year, U.S. News & World Report ranked UK HealthCare the No. 1 hospital in Kentucky. Markey Cancer Center ranked among the nation's Top 50 providers for cancer care, and we were considered high-performing in geriatrics, nephrology and orthopaedics, as well as in eight common procedures and conditions.

### Focused on quality, safety and value

While we celebrate these successes, we can never be satisfied by them. Our aspirations in quality, safety and value compel us to seek improvement. Our aim is to be a highly reliable organization where problems are anticipated, detected early and swiftly addressed for the very best patient results.\*

During fiscal year 2019, we focused on creating resources and tools to provide the best care – reducing unnecessary variation and making it easier to do the right things. We evaluated and selected a new state-of-the-art electronic health record that will support our ambitions. It launches in June 2021.

We appointed dyads – physicians paired with nurse managers or administrators – to hardwire continuous quality improvement. We restructured to create a Performance Analytics Center of Excellence and a Center for Quality, Safety and Value.

Like those who excel in quality, safety and value, we have embraced five principles:

- 1) Unyielding commitment to reduce harm
- 2) Relentlessly creating a culture of safety
- 3) Quality improvement skills at all levels
- 4) Daily management for safety
- 5) Learning from data continuously\*\*

\*Patient Safety Primer, AHRQ, Sep 2019

\*\*Principles from Solutions for Patient Safety network

### Improving access and capacity

Access to care is a key feature of both quality and being patient centered.

Thanks to the efforts of our faculty physicians and clinic management to improve access and flow, by the end of FY19 70,000 additional clinic appointment slots had been created.

In September 2018, we announced an investment in Lexington Surgery Center, giving us greater surgical capacity. Months later we opened a new 22,000-square-foot facility for the outpatient surgery center next to our Turfland location – fitted with six operating rooms and two procedure rooms.

Early in 2019 we announced our intention to partner with Lexington Clinic in outpatient cancer care to improve access to cancer care in the Bluegrass. By June, UK Markey Cancer Center at Lexington Clinic was a reality.

Statewide, we continue to operate 200+ outreach clinics and 100+ telehealth programs. Our work with other providers continues via a collaborative and affiliate networks. Regional medical education campuses in Morehead, Bowling Green and Northern Kentucky are helping address Kentucky's need for physicians, particularly those willing to practice in rural areas.

### Leading through change

UK HealthCare is transforming to meet our mission and deliver on our vision for a healthier Kentucky. With pride, I can say UK HealthCare is stepping up to the challenge to become a high-reliability health system for Kentucky.



Mark F. Newman, MD  
Executive Vice President for Health Affairs  
UK HealthCare®/University of Kentucky

## NEW IN 2019

# NEW RELATIONSHIPS IMPROVE ACCESS

In fiscal year 2019, UK HealthCare entered into two significant relationships that would improve access to specialty care for many people living in Central Kentucky.

First came the acquisition of a controlling interest in an ambulatory surgery center, Lexington Surgery Center. Demand for operating rooms at UK HealthCare's Chandler Hospital, Center for Advanced Surgery and Good Samaritan Hospital had grown alongside patient volumes. Competition for operating room time was delaying more routine and elective surgeries.

The purchase has improved surgical access at UK HealthCare, diverting more routine and some elective surgeries to this more convenient off-campus location.

In 2019 UK HealthCare also struck a deal with community-focused provider Lexington Clinic. The new collaboration expands and enhances outpatient cancer care under the name UK Markey Cancer Center at Lexington Clinic. The collaboration includes medical oncology and infusion services in Lexington, as well as radiation therapy and medical oncology and infusion services in Richmond.

The new relationship expands the number of patients who can participate in clinical trials, crucial to the development of new drugs and therapies at the UK Markey Cancer Center, the state's only National Cancer Institute-designated program. It also creates opportunities to boost UK's tripartite mission of excellence in research, education and clinical care within Central Kentucky.

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### 3 locations

Additional locations in expanded community service footprint - Lexington South Broadway, Lexington Andover and Richmond.

### 6 providers

Number of providers at launch in June available to see cancer patients - four medical oncologists, one advanced practice provider, one radiation oncologist.

### 9,491 visits

Patient visits in calendar year 2019 since June 24 at UK Markey Cancer Center at Lexington Clinic.



LEXINGTON SURGERY CENTER | UK HealthCare

**22,000 square feet**

Size of the new Lexington Surgery Center at 2115 Harrodsburg Road, which accommodates six operating rooms and two procedure rooms.

**8,000 surgeries**

Number of surgeries expected to be performed annually at the new ambulatory surgery center, freeing up capacity for complex and advanced subspecialty procedures in hospital-based operating rooms.

A new facility for Lexington Surgery Center opened in July 2019 near UK HealthCare's outpatient location at Turfland.

# EXCEPTIONAL CLINICAL CARE

Our work continued in 2019 to ensure that patient-centered, high-quality care grows and thrives at UK HealthCare.

Significant gains were made in 2019 to improve access to specialty care. Two prime examples – a partnership with Lexington Clinic to improve access to cancer care, as well as the acquisition of a majority interest in Lexington Surgery Center to increase surgical capacity.

Since Kentucky leads the nation in cancer incidence and mortality, the demands on the state’s only National Cancer Institute-designated comprehensive cancer center – UK HealthCare’s Markey Cancer Center – led to an agreement with Lexington Clinic that is increasing access for cancer specialty care and chemotherapy.

Precision medicine – an individualized treatment approach that takes into account a person’s genes, environment and lifestyle – is truly at the frontier of medicine. New precision medicine services in cancer and cardiogenetics are giving Kentucky patients access to the most exciting development in medicine today.

Because of UK HealthCare’s breadth and depth of services, we are often called upon to step in when a gap must be filled. Such a need arose in 2019 when Jewish Hospital in Louisville discontinued its heart transplant program. Patients on the Jewish transplant waiting list were offered the opportunity to receive an evaluation and treatment at UK HealthCare, which most accepted.

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## 99.94 of 100

UK physicians earned an “Exceptional Performer” score in 2018 under the CMS Quality Payment Program.

## 95.03 of 100

UK advanced practice providers and other providers earned an “Exceptional Performer” score in 2018 under the CMS Quality Payment Program.

## 102 new kidneys

Number of kidney transplants projected for 2019, growing from 98 in 2017. Also, liver transplants were up almost 30%.





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## 1,028 home visits

Registered nurses from Bluegrass Care Navigators visit patients at home within 48 hours of being discharged from UK HealthCare hospitals to reduce the need for readmission.

## 240+110 clinics

UK HealthCare supports 240 outreach clinics across Kentucky, plus operates an additional 110 telehealth clinics to make specialty care more accessible across the state.

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Jill Kolesar, PharmD, directs UK HealthCare's Precision Medicine Center. As part of the Markey Cancer Center, Precision Medicine combines groundbreaking developments in cancer treatment with access to early phase clinical trials unavailable anywhere else in Kentucky.

## PERFORMANCE DOMAIN

# SAFE, EFFECTIVE CARE

A laser focus on quality, safety and value continued in 2019 as productive pairs (dyads) were appointed and ongoing cycles of quality improvement began across all clinical areas.

Resources supporting quality, safety and value were reorganized in 2019, resulting in the creation of the Performance Analytics Center of Excellence (PACE) under the newly created position of chief data officer, which was closely aligned with the new Center for Quality, Safety & Value under a new senior director for quality, safety and value.

The Meds-2-Beds service provided by UK HealthCare Pharmacy Services ensured that 85% of eligible patients being discharged from Chandler Hospital had their medications before leaving the hospital. This is a convenience for patients and families that also supports their ability to comply with the discharging physician's instructions for home care.

UK HealthCare exceeded its goals in reducing hospital-acquired infections by achieving its targets in four of five areas: catheter-associated urinary tract infection, central line-associated bloodstream infection, C. difficile, and surgical site infections (abdominal hysterectomy). Compared against benchmark academic centers, UK HealthCare's ranking in safety rose in 2019.

Finally, fiscal year 2019 represented a full decade of an approach developed at UK HealthCare to "swarm" a problem or issue.



Significant gains made in the safety domain of the 2019 Vizient Quality & Accountability Study improved UK HealthCare's overall ranking among academic health system peers to four stars out of five.

**DOWN > 50%**

Reduced episodes of hypoglycemia among hospitalized patients by more than 50%.

**84 pairs**

Number of dyads (physician - administrative pairs) created to lead quality improvement in outpatient areas. Another 58 dyads are working in hospital inpatient and procedural areas.



## 25 survived!

In fiscal year 2019, 25 of every 100 hospitalized patients who were likely to die because of complications and the severity of their illness, in fact, survived. The observed-to-expected mortality ratio was 0.75.

## 2,152 swarms

After a decade, more than 2,000 problems or issues have been "swarmed" in a unique process to uncover root causes and find solutions.

Josh Cobb, practice manager, left, and Dwan Perry, DO, medical director of physical medicine and rehabilitation at Good Samaritan Hospital, are working together as a dyad to lead their care team in improving patient satisfaction.

## PERFORMANCE DOMAIN

# EXTRAORDINARY CARE EXPERIENCE

UK HealthCare has built a strong reputation for advanced specialty care. For the fourth year in a row, we were named the No. 1 hospital in Kentucky by U.S. News & World Report, with the Markey Cancer Center ranked among the best cancer centers in the nation.

Academic health centers like UK HealthCare are complex and sprawling. Like most academic health centers, size is a double-edged sword – both a strength as well as a challenge in meeting patient and family expectations for the care experience.

Since our 2015 strategic plan, UK HealthCare has been committed to delivering patient-centered care and focusing attention on issues of access, convenience, diversity and inclusion. Advisory groups have been built to ensure the voice of the patient and family is heard.

In 2019, we continued to improve upon staff and provider engagement, outpatient access, and team training for patient-centered care. We are weaving our organizational values – Diversity, Innovation, Respect, Compassion and Teamwork – into all that we do.

It is our firm belief that an extraordinary care experience springs from an engaged and aligned workforce. As we take care of each other, we build a powerful platform for the patient care experience.

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**83.1%**

Hospitalized adult patients who rated their communication with their doctors a “9 or 10” (10-point scale).

**6 goals**

Parents of babies hospitalized in the neonatal intensive care unit rated six key areas of experience (doctors, nurses, environment, etc.) well above the Kentucky Children’s Hospital targets, with “willingness to recommend” at 98.1%.

**5,118 awards**

Bronze, silver and gold awards for exceptional performance given to staff in 2019 as part of UK HealthCare’s STAR (Special Thanks and Recognition) program – up 37% over 2018.

**9 of 10**

Patients (90.9%) seen in an outpatient setting who indicated their “willingness to recommend” UK HealthCare to friends and family who may need care.



**2,832**

Staff trained in patient-centered care by the Office of Patient Experience in 2019.

**1,806**

Employees recognized for career achievements in 2019, representing 18,000 combined years of service.

**70**

Patients or family members participating in formal advisory councils to improve the care experience.

Head and neck cancer surgeon Joseph Valentino, MD, performs an examination as part of a cancer screening.

## PERFORMANCE DOMAIN

# EFFICIENT, AFFORDABLE CARE

Health care's transition from fee-for-service to value-based care is making it necessary to innovate aggressively around quality, safety, cost and efficiency. Fiscal year 2019 proved to be a momentous year in preparing UK HealthCare for this future.

In 2019 UK HealthCare selected a vendor for a new electronic health record (EHR), both a major investment and strategic enabler in advancing quality, safety and efficiency. The new EHR will be in place by June 2021.

Alongside a new EHR, UK physicians piloted the first wave of an initiative to improve protocols and care delivery. Known as Advancing BEST Care, its purpose is to improve the delivery of care with an emphasis on quality, safety and efficiency.

In a move to improve surgical capacity, UK HealthCare purchased controlling interest in Lexington Surgery Center in September 2018. As FY19 came to a close, UK HealthCare also launched a partnership with Lexington Clinic around cancer services to improve the region's access to care for common cancers.

Major restructuring resulted in creation of a Performance Analytics Center of Excellence and a Center for Quality, Safety & Value. 2019 also marked the launch of the Enterprise Project Management Office, standardizing project management processes and tools in order to support the system's prioritized portfolio of work.

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**70,000**

Additional outpatient clinic appointment slots created thanks to improved clinic workflows generated via the BEST (Building Efficiencies through Strategic Transformation) process.

**\$37 million**

In 2019, amount of new and sustained financial improvements through the BEST (Building Efficiencies through Strategic Transformation) initiative. This exceeded the system's max goal.

**1,298**

Number of new and renewal Medicaid applications UK HealthCare's patient financial advocates filed in 2019 on behalf of patients and their family members.



**59**

Total number of projects initiated in fiscal year 2019 and managed through the health system's new project management team. Twenty-five projects were completed during the year.

**2,000+**

Number of prior authorizations submitted to payers by pharmacy services to assist patients.

**111,610**

Increase in medication prescriptions filled by UK pharmacies over the previous year (21.9% more).

Revenues from UK HealthCare Pharmacy Services help bridge the gap between cost and reimbursement. Because it serves many of Kentucky's uninsured and low-income patients, UK HealthCare can access discounted 340B drug pricing to reduce the cost of outpatient medications for patients and help fund services to those communities.

## PERFORMANCE DOMAIN

# HEALTHY FINANCIAL PERFORMANCE

As part of a public land grant institution, UK HealthCare's mission of clinical care, research and education must serve the commonwealth. Stability and earnings in excess of expenses are necessary to reinvest in our mission.

Thanks to the hard work of our teams to manage and maintain healthy financial performance, in fiscal year 2019 UK HealthCare was able to deliver financial assistance of more than \$47 million to those who were unable to cover the cost of their care – an increase of 11% in charity care over FY18.

We also reinvested in our people, programs and facilities, hiring and developing our teams, building programs, and renovating areas such as the medicine specialties clinic, ear nose and throat clinic and radiation oncology.

And with sustained efforts to expand ambulatory capacity and access, UK HealthCare is experiencing significant growth throughout our clinics.

After positive net adjustments of \$24.1 million in 2019, UK HealthCare recorded financial performance that exceeded expectations. We ended the year with a healthy margin – above the roughly \$0.5 million margin expected initially.

Like most other health systems, UK HealthCare is experiencing reimbursement pressures. Thanks to efforts to improve efficiencies and manage costs, UK HealthCare continues to generate the funds necessary to fuel our mission and vision.

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### **\$74 million**

Funds invested in building, renovation, expansion, equipment and other capital improvements in fiscal year 2019.

### **41,589 discharges**

Number of hospital discharges in FY19 – an average of 114 discharges per day. A 2% increase over the previous year.

### **2.14 million**

Total outpatient (ambulatory) visits served in FY19 – nearly 8,500 visits to UK HealthCare clinics on average every working day. An increase of 27% over FY18.





**6.94% margin**

Total margin is the percent of all income in excess of expenses used to reinvest in the health care, education and research mission.

**9,311 FTEs**

Full-time equivalent positions paid at UK HealthCare by year's end, June 30, 2019. This represents an increase of 5% over the previous year.

Radiation oncologist Mahesh Kudrimoti, MD, and team have been able to improve on treatment time and delivery since purchase of the Halcyon™ treatment system, included in renovations to the radiation oncology center.



# UNIVERSITY OF KENTUCKY **COLLEGE OF MEDICINE** **ANNUAL REPORT 2019**

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## **MISSION**

The UK College of Medicine promotes a diverse and inclusive environment that provides excellence in education, equitable health care, and transformative research to improve the health and wellness of Kentuckians and beyond.

## **VISION**

The College of Medicine is a national leader in solving the challenges in health care through transdisciplinary and transformational research, education, and advanced clinical care.



## UK COLLEGE OF MEDICINE

# 2019 REPORT FROM THE DEAN

The UK College of Medicine aims to advance the standards of care through education, research and advanced clinical care. Our work toward this goal has been particularly evident this year thanks to amazing efforts by our team of faculty, staff and learners.

As a result, we have seen unprecedented growth in the college.

For starters, we successfully completed our accreditation review by the Liaison Committee in Medical Education, certifying that we can continue educating the next generation of physicians and scientists. That is huge, especially as we were reviewed as a markedly expanded multi-campus college. In fact, this year we launched a four-year regional campus in Northern Kentucky following the launch of a campus in Bowling Green last year, moving our total planned college size to over 800 students once all four years are enrolled.

Together, we also exceeded \$200 million in external research funding, which included a doubling of National Institutes of Health funding from 2016. And finally, our graduate, undergraduate and residency programs continue to exceed expectations. Strategic efforts led to increased Accreditation Council for Graduate Medical Education programs helping to ensure that our medical school graduates have opportunities to complete their training in Kentucky. We also launched new degree programs and helped educate a record number of undergraduate students through our Office of Biomedical Education.

As our college's reputation grows, our aspirational goals continue to exceed expectations, making what was impossible wildly possible.



Robert S. DiPaola, MD  
Dean, University of Kentucky College of Medicine  
Vice President, Clinical Academic Affairs

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**\$202,250,476**

Total amount of grants and contracts awarded to the UK College of Medicine in fiscal year 2019.

**1,713**

Total number of medical students, residents and fellows, and graduate students currently training at the College of Medicine.

**1,117**

Total faculty members as of Aug. 1, 2019, who are committed to the educational, research and clinical care missions of the College of Medicine.



**26%**

Percent of all faculty across both clinical and basic science departments in the UK College of Medicine who are non-majority faculty.

**23rd**

The College of Medicine ranks 23rd among public medical schools in terms of National Institutes of Health funding, according to the Blue Ridge Institute for Medical Research.

University

Dean Robert S. DiPaola, MD, delivers the commencement address to the class of 2019. The students in the class of 2019 matched into 24 specialties and 39 percent elected to stay in Kentucky to further their training.

# UNDERGRADUATE MEDICAL EDUCATION EXPANDING OUR EFFORTS TO ADDRESS CRITICAL HEALTH NEEDS

Nearly 60 years ago, the UK College of Medicine admitted its first class of medical students, marking a major moment in Kentucky's history by establishing an academic medical center that would strive to better the health care for the state.

For the last two years, the College of Medicine has worked to address the physician shortage, particularly in rural and underserved areas of the commonwealth. By partnering with well-respected health care organizations and universities, the College of Medicine received approval from the Liaison Committee on Medical Education to launch the second four-year regional medical school campus and expand the class size by 35 students.

As the College of Medicine's number of students has grown, so has its presence and impact across the state. The college continues to provide students a high-quality medical education while fostering an environment of collaborative learning so they can become accomplished physicians, residents and fellows who help advance the health and well-being of our communities.

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## 1960

The year the UK College of Medicine admitted its first class of 40 medical students after receiving more than 400 applications.

## 60

Number of first- and second-year medical students at the Bowling Green Campus – a partnership with Med Center Health and Western Kentucky University.

## 203

Total number of first-year medical students across all four campuses.



**84%**

Percent of Rural Physician Leadership Program graduates who have completed their residency training and are practicing in rural Kentucky as of May 2019.

**35**

Approved number of first-year medical students at the Northern Kentucky Campus – a collaboration with St. Elizabeth Healthcare and Northern Kentucky University.

Through its campus expansion efforts, the UK College of Medicine has allowed for more students to receive a high-standard, well-rounded medical education in Kentucky for Kentucky. Madeline Ryan, a second-year student at our Lexington campus, has a variety of educational opportunities, including early hands-on clinical experiences.

## GRADUATE MEDICAL EDUCATION

# ESTABLISHING MORE OPPORTUNITIES FOR ADVANCED MEDICAL TRAINING

In conjunction with the campus expansion initiative and the identified goals in the college's strategic plan, the UK College of Medicine is committed to expanding graduate medical education opportunities across the commonwealth.

The Office of Graduate Medical Education has markedly increased the number of Accreditation Council for Graduate Medical Education (ACGME) residency programs to ensure additional opportunities for medical students to further their training. Research indicates that physicians who train in the state are more likely to remain in the state to practice. The increased efforts to expand programming echo the college's commitment to training physicians in Kentucky for Kentucky.

UK offers physician training programs in most medical and surgical specialties among its campuses, along with training programs in dentistry, oral and maxillofacial surgery, pharmacy, optometry, and health administration. Because UK HealthCare treats our state's sickest patients, residents and fellows who continue their education with UK are immersed in a growing health care environment that provides them highly competitive experience and clinical training opportunities.

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**70**

Number of ACGME-accredited residency and fellowship programs that are available at our campuses in Lexington, Bowling Green, Hazard and Morehead.

**39%**

Percent of 2019 UK College of Medicine graduates who stayed in Kentucky for their residency training.

**32%**

Percent of 2019 College of Medicine graduates who stayed within UK HealthCare to complete their residency programs.





**88%**

Percent of residents and fellows who trained at UK HealthCare and graduated from the UK College of Medicine and who stayed in Kentucky to practice in 2019.

**843**

Number of residents and fellows who are furthering their training at the College of Medicine.

As part of our curriculum, the UK College of Medicine offers a combination of advanced skills training, clinical patient models and standardized patient scenarios to prepare our students, residents and fellows for practicing medicine.

## BIOMEDICAL EDUCATION

# BROADENING THE SCOPE OF RESEARCH WHILE PROVIDING ADDITIONAL EDUCATIONAL EXPERIENCES

The UK College of Medicine's Office of Biomedical Education is dedicated to extending its efforts in biomedical research to learners across the spectrum, including undergraduates, graduates, doctoral and postdoctoral students.

Through these efforts this year, the college broadened the scope of research to undergraduate students, allowing them to work alongside some of the nation's top researchers on issues related to cancer, diabetes and obesity, cardiovascular health, Alzheimer's disease, and many other important biomedical research frontiers.

This year, the college has expanded its educational programs. For example, we launched the state's first Master of Forensic Toxicology and Analytical Genetics program, a master's degree program that allows students to advance their skills and knowledge of forensic science, ethics in the field as well as communication, and legal perspectives that will be valuable in their careers.

Additionally, the college now offers a minor in pharmacology to provide a rare and distinctive experience that complements a wide range of majors across campus, including biology, chemistry, neuroscience, agricultural and biomedical technology, and health sciences. This minor focuses on a field that has had enormous impact on human, animal, and agricultural health and well-being than that of any other discipline within science.

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**3**

Number of UK College of Medicine basic science departments ranked nationally in the Top 20 according to the Blue Ridge Institute for Medical Research. The departments include physiology, biochemistry, and pharmacology and nutritional sciences.

**222**

Number of full-time faculty members as of Aug. 1, 2019, in the basic science departments who ensure students are well-prepared for a career in medicine or research.

**\$27 million**

The department of behavioral science accounted for \$27,095,711 in total grants and contracts during fiscal year 2019.



**231**

Number of graduate students pursuing their education across our nationally recognized basic science departments.

**276,555**

Number of square feet of research space available to the UK College of Medicine.

The UK College of Medicine Office of Biomedical Education has increased its variety of programs and research opportunities so future scientists and researchers can gather valuable experience at all stages of their medical education.

## RESEARCH

# EXPANDING THE COLLEGE'S GROUNDBREAKING RESEARCH

As part of its transdisciplinary strategy, the UK College of Medicine has put a focus on the development of the university's strategic research focus areas by working to create a community that increases the impact of research within the college and builds the new research teams necessary to find solutions to Kentucky's most pressing health problems.

By the end of fiscal year 2019, the College of Medicine received more than \$202 million in total grants and contracts – a near doubling of funding since 2016. Through this tremendous accomplishment, the College of Medicine was able to enhance its status as one of the leading public universities for research, moving to 23rd in terms of National Institutes of Health funding, according to Blue Ridge Institute for Medical Research rankings.

The unprecedented growth in research funding was made possible thanks to efforts by faculty spread across all departments and will allow College of Medicine research teams to accomplish more than what was previously believed possible. This achievement will undoubtedly lead to a higher quantity of innovative projects that will help make Kentuckians healthier.

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**\$129.5 million**

Total National Institutes of Health funding awarded to the UK College of Medicine in federal fiscal year 2019 – a 100% increase since 2016.

**48.5%**

Percent of the University of Kentucky's total grants and contracts that can be attributed to the College of Medicine.

**757**

Number of awards given to the College of Medicine in fiscal year 2019.

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During fiscal year 2019, the UK College of Medicine was awarded \$49,546,678 in grants related to the strategic priority area of neuroscience, including more than \$23 million to the Sanders-Brown Center on Aging, the National Institutes on Aging-funded Alzheimer's disease center.

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**65.7%**

Percent of National Institutes of Health funding granted to Kentucky medical schools that was awarded to the UK College of Medicine in federal fiscal year 2019.

**\$612,880**

Average external funding per investigator.

**\$87 million**

Total funding awarded to UK by the National Institute on Drug Abuse and the Substance Abuse and Mental Health Services Administration for the HEALing Communities study grant as part of the Helping End Addiction Long-term (HEAL) National Institutes of Health initiative.



# OPERATIONAL STATISTICS & TRENDS

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## OFFICE OF THE EXECUTIVE VICE PRESIDENT FOR HEALTH AFFAIRS+

**Mark F. Newman, MD**  
Executive Vice President for Health Affairs

**Mark D. Birdwhistell**  
Vice President for Health System Administration & Chief of Staff

**Craig Collins**  
Senior Vice President & Chief Financial Officer

**Robert S. DiPaola, MD**  
Vice President & Dean, College of Medicine

**Jay Grider, DO, PhD**  
Chief Physician Executive & Chief Clinical Officer (Interim)

**Cecilia Page, DNP, RN, FACHE, FAAN**  
Chief Information Officer

**John A. Perry**  
Associate Vice President for Philanthropy

**John Phillips, MHA**  
Vice President for Ambulatory Services

**Brett Short**  
Chief Compliance Officer

**Colleen H. Swartz, DNP, MBA, RN, NEA-BC**  
Vice President for Hospital Operations

+As of Dec. 31, 2019



## OPERATIONAL STATISTICS & TRENDS

### Hospital Operating Statistics

For year ending June 30, 2019

|   | 2019           | 2018           | 2017           |
|---|----------------|----------------|----------------|
| <b>Discharges</b>                       |                |                |                |
| Medicare                                | 15,058         | 14,566         | 13,463         |
| Medicaid                                | 14,778         | 15,023         | 14,789         |
| Commercial/Blue Cross                   | 10,734         | 10,574         | 9,791          |
| Patient/Charity                         | 1,019          | 746            | 663            |
| <b>Total Discharges</b>                 | <b>41,589</b>  | <b>40,909</b>  | <b>38,706</b>  |
| Licensed Beds                           | 945            | 945            | 945            |
| Available Beds                          | 942            | 913            | 883            |
| Average Daily Census                    | 774            | 755            | 722            |
| Average Length of Stay                  | 6.79           | 6.73           | 6.81           |
| Case Mix Index                          | 1.98           | 2.00           | 2.01           |
| <b>Surgery</b>                          |                |                |                |
| Operative Cases                         | 34,284         | 33,320         | 32,679         |
| <b>Hospital-based Outpatient</b>        |                |                |                |
| Charged Hospital Clinic Visits          | 600,712        | 565,903        | 538,256        |
| Emergency Visits                        | 111,819        | 112,093        | 111,920        |
| <b>Total Hospital Outpatient Visits</b> | <b>712,531</b> | <b>677,996</b> | <b>650,176</b> |

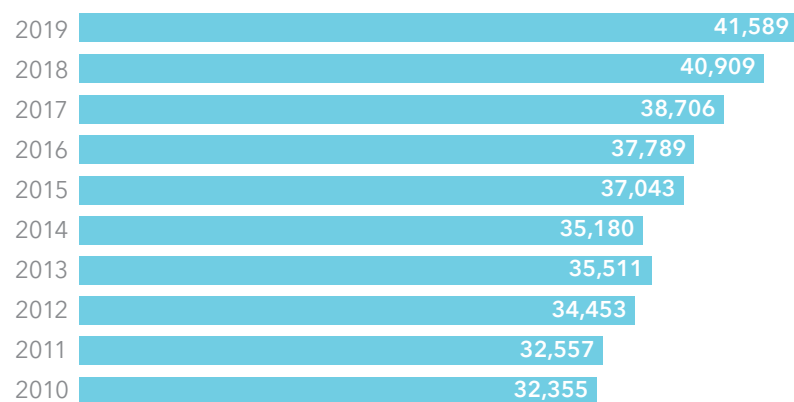
### Other Operating Indicators

For year ending June 30, 2019

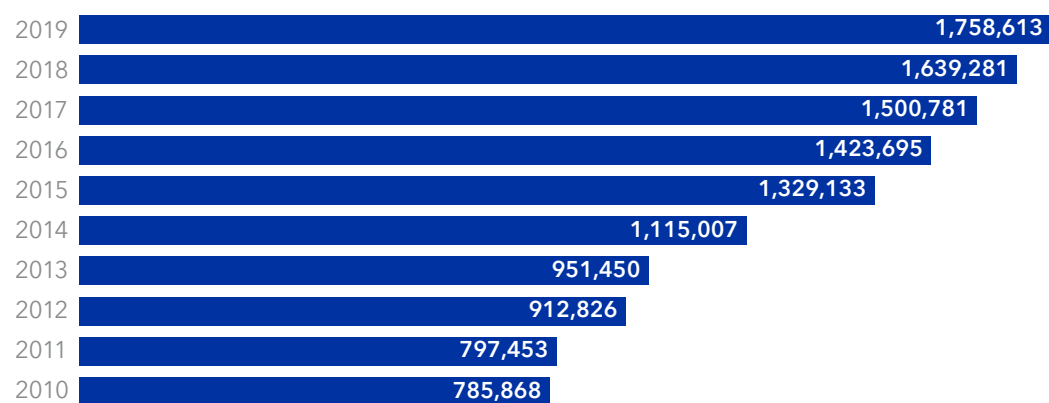
|  | 2019      | 2018        | 2017      |
|--|-----------|-------------|-----------|
| <b>Ambulatory Services</b>   |           |             |           |
| Ambulatory Physician Visits  | 896,404   | 834,142     | 795,557   |
| Professional Net Revenue*  | \$302,836 | \$281,113** | \$277,118 |
| <i>*Accrual-based and does not include bad debt; \$ in thousands. **Year 2018 has been restated.</i> |           |             |           |
| <b>Other Service Relationships</b>   |           |             |           |
| UK*MDs Physician Calls   | 140,770   | 146,916     | 165,734   |
| Health Connection Consumer Calls   | 258,314   | 264,172     | 299,322   |
| Website Sessions (Avg./Mo.)  | 198,733   | 174,267     | 178,314   |



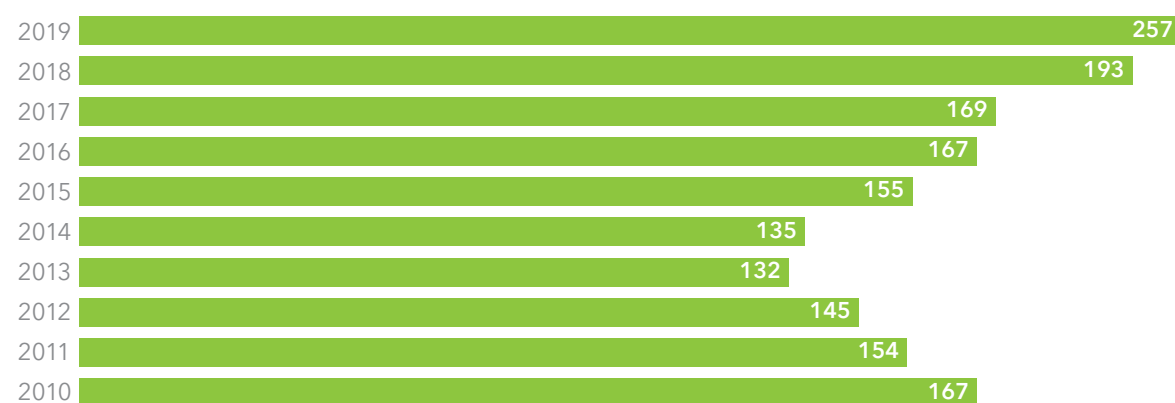
### Hospital Discharges



### Hospital Operating Revenue (\$ in the thousands)\*



### Grants and Contracts Awarded (\$ in the millions)



## COMMUNITY SUPPORT

# THE IMPACT OF YOUR SUPPORT

Our community of donors plays an essential role in advancing our vision for a healthier Kentucky. Thousands of you who share our passion have donated more than \$160 million in the past decade to help us serve the commonwealth through superlative medical education, research and patient care.

These funds buttress our efforts to recruit gifted, scholarly faculty and provide the resources necessary for their research. They also help us attract the brightest medical students who might otherwise be unable to afford their education.

Philanthropy also helps underwrite facility and technology updates so that our citizens can heal as close to home as possible, no matter how sick they are.

With your help, our efforts are being rewarded. Patients are coming from all corners of the world seeking treatments born from research right here in Kentucky. We are educating greater numbers of medical students to address the alarming shortage of doctors in Kentucky and elsewhere. Faculty of the highest caliber are moving to Lexington to conduct research that will help unravel the mysteries of Alzheimer's disease, cancer, addiction and more; all of which disproportionately affect Kentuckians.

Philanthropy helps transform UK HealthCare and the UK College of Medicine. We could not do it without you.

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### **\$1 million+**

More than \$1 million given for diabetes education, research and enhanced patient care at the UK Barnstable Brown Diabetes Center at UK HealthCare's Turfland location.

### **115 counties**

Philanthropic support comes from 115 Kentucky counties, 48 U.S. states and five countries.

### **\$17 million**

Annual average of community support over the past six years.



## 10,000+ givers

More than 10,000 individuals and organizations supported the vision of UK HealthCare and/or the UK College of Medicine through philanthropy in fiscal year 2019.

## 9 x \$500k

In FY19, there were nine gifts of \$500,000 or more.

Pediatric and adult patients of the Barnstable Brown Diabetes Center benefit from dollars given to support diabetes education. Here, educator Andrea Francis, MS, RD, LD, LDE, explains an insulin pen device and the importance of insulin as treatment for Type 1 diabetes.

## UK HEALTHCARE LEADERSHIP

# NEW UK HEALTHCARE EXECUTIVE LEADERSHIP

Transformation for quality, safety and value has included restructuring of the executive team. Three new roles have been created to join the executive team in leading the organization forward through interdisciplinary collaboration and continued migration toward high reliability.

### Chief Physician Executive & Chief Clinical Officer

#### **Jay Grider, DO, PhD**

The chief physician executive (CPE) and chief clinical officer bridges provider interests between the physician practice (Kentucky Medical Services Foundation) and UK HealthCare. The CPE is responsible for oversight of the clinical physician practice, quality improvement and patient safety, and creation of an integrated medical group.

The intent is that all strategic and key management decisions have the full participation of the physician faculty.

Jay Grider, DO, PhD, associate chief medical officer for ambulatory services, has filled the role on an interim basis since its creation in November 2018. In December 2018, the KMSF Board of Trustees named Dr. Grider president-elect and chief executive officer. Grider's role at KMSF further strengthens alignment of the physician practice and UK HealthCare.

### Vice President for Ambulatory Services

#### **John Phillips, MHA**

In keeping with a heightened strategic emphasis on outpatient services, a vice president for ambulatory services was created in May 2019. John Phillips, chief operating officer for ambulatory services, was promoted into the role.

Responsible for strategic and administrative leadership of ambulatory care venues, this role works closely with UK College of Medicine leaders to ensure clinical

and operational effectiveness in delivery of outpatient services. Priorities include sound financial stewardship and sustained integration internally and externally.

Phillips joined UK in 2005 and was later tapped to direct facility operations and the transition into the new 512-bed pavilion at Chandler Hospital. He was the first chief administrative officer at the newly built Eastern State Hospital and Central Kentucky Recovery Center. In 2016, he became chief operating officer for UK HealthCare's ambulatory services. Phillips has been instrumental in setting ambulatory strategy and leading improvements in performance, quality, provider and staff engagement, and integration.

### Vice President for Hospital Operations

#### **Colleen Swartz, DNP, MBA, RN, NEA-BC**

In elevating hospital operations to the executive team, UK HealthCare acknowledges their importance and its need to better align hospital and ambulatory operations. This executive role also oversees operations of Eastern State Hospital through a dyad partnership with the UK chair of psychiatry.

When the role was created in November 2018, Colleen Swartz, formerly chief administrative officer and chief nurse executive, was asked to fill it on an interim basis. As of February 2019, the role became hers fully.

Throughout her tenure at UK HealthCare, Swartz has been an advocate and achieved results in our systemic priorities around quality and safety. She has held progressive clinical and administrative leadership roles, including a position that consolidated management responsibilities for UK hospitals and nursing practice for the UK HealthCare enterprise. Throughout her career, she has demonstrated a commitment to patient-centeredness and a proven ability to bring others along toward that same goal.

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New members of the UK HealthCare executive team, left to right, John Phillips, vice president for ambulatory services; Colleen Swartz, vice president for hospital operations; Jay Grider, DO, interim chief physician executive.





Northern Kentucky Campus

ILLINOIS

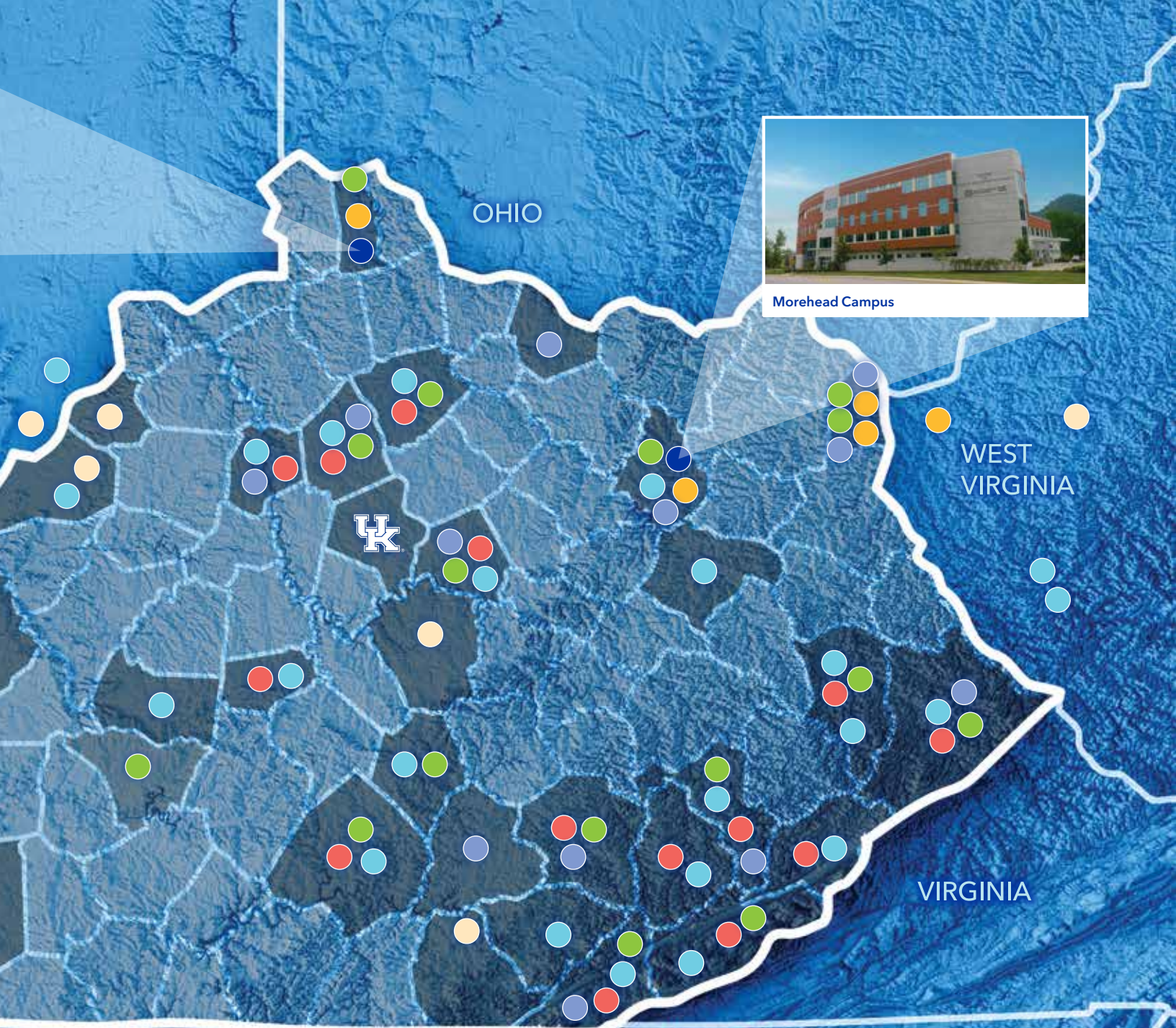
INDIANA



Bowling Green Campus

TENNESSEE

# STATEWIDE IMPACT MEETING HEALTH CARE NEEDS **ACROSS KENTUCKY**



Morehead Campus

Making good on our commitment to serve the health care needs of Kentucky, UK HealthCare continues to grow its presence across the commonwealth. Our team takes pride in the breadth and depth of clinical programs, networks and affiliations that make it possible for Kentuckians to remain in state, closer to home, for complex, subspecialty care.

In 2019, UK HealthCare operated 240 clinic sites across Kentucky and provided medical coverage via remote capabilities for about 110 telehealth clinics. Medical education is also now provided on three regional campuses in addition to Lexington.

Our efforts to build a statewide network are ongoing. We continue to add new clinical affiliates across the state and acquire the volumes necessary to support our traditional mission to provide highly specialized, complex care, research and education as the state's premier academic health center.

- Norton Healthcare/UK HealthCare Stroke Care Network
- Markey Cancer Center Affiliate Network and Outreach Relationships
- Markey Cancer Center Research Network
- Organ Failure and Transplant Network and Outreach Relationships
- Gill Heart and Vascular Institute Affiliate Network and Outreach Relationships
- Obstetrics and Gynecology Community Divisions and High Risk Obstetrics Telemedicine Program
- Medical School Regional Campus

\*Current as of Dec. 31, 2019

## POWER OF ADVANCED MEDICINE

# THE SAGA OF STINKY MONKEY

Ezra Yost's best friend is a toy named Stinky Monkey. When Ezra's family needed to travel from Indianapolis to Kentucky Children's Hospital for his little brother's surgery, Stinky Monkey came along. Somewhere during the day, Stinky Monkey went missing and the family had to return to Indianapolis without him. Ezra was heartbroken and cried endlessly.

Word got back to Daun Wickline, manager of UK HealthCare's gift shops. Once she realized she could not find the original "Stinky," Wickline located the now discontinued toy in a shop in Georgia, asked them to monogram it and had it sent to the Yosts.

But how would they explain Monkey's brand-new appearance to Ezra? Health education librarian Korinne Callihan asked Erich Maul, MD, chief of hospital pediatrics, to record a video for Ezra that would explain Stinky had gotten stuck at the hospital and needed a little tune-up. Ezra watched the video hundreds of times as he waited.

Stinky Monkey's return was made possible by dozens of people coming together.

"It's about taking care of that kid that's in the bed," said Maul. "And what comes part and parcel with that is taking care of the family."

Compassion is integral to the Power of Advanced Medicine.





Left: Erich Maul, MD, chief of hospital pediatrics, gave Stinky Monkey a check-up when the Yosts returned for a follow-up visit.

Top: Ezra Yost with Stinky Monkey. For more photos and the full saga of Stinky Monkey, go online to [proof.ukhealthcare.com](http://proof.ukhealthcare.com).

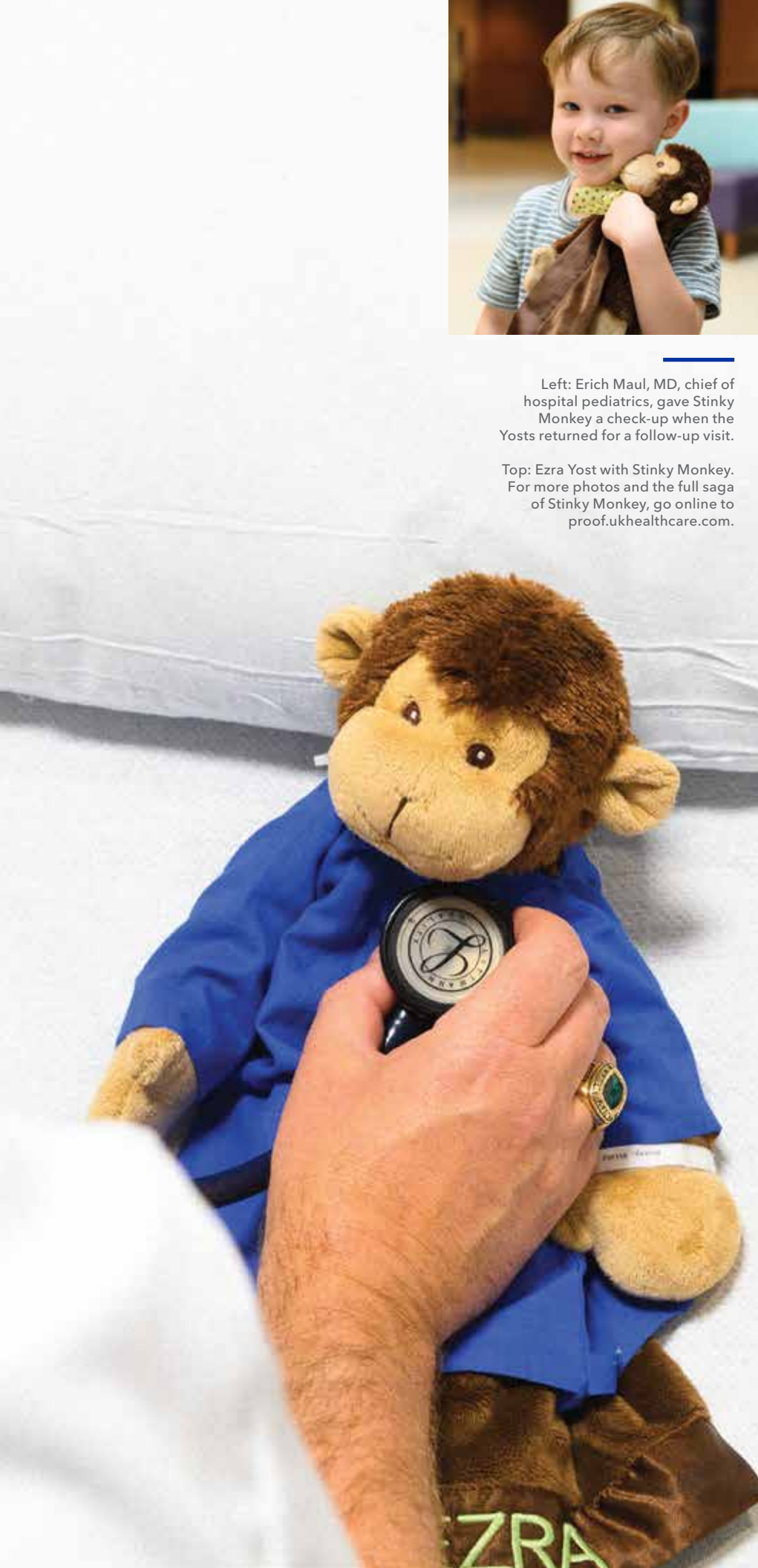
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**Direct comments or questions to:**

Office of the EVPHA  
900 South Limestone  
Wethington Building, Suite 317  
Lexington, Kentucky 40536  
859-323-5126  
[ukhealthcare.uky.edu](http://ukhealthcare.uky.edu)

-  UK HealthCare
-  @UK\_HealthCare
-  UKHealthCare
-  UK HealthCare
-  UKHealthCare.net





900 South Limestone  
Wethington Building, Suite 317  
Lexington, Kentucky 40536  
859-323-5126

[ukhealthcare.uky.edu](http://ukhealthcare.uky.edu)

