

Middle East HEALTH

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November-December 2013

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SUPPLEMENT

North American Hospitals

New and expanded programs target international patients



Super specialty pediatric hospitals
provide world's foremost treatments

Middle East patients continue
to travel for specialised care



Why do doctors from 92 countries and every corner of the world trust their patients to us?



For more than 120 years, Children's Hospital of Pittsburgh of UPMC has been at the forefront of pediatric medicine. We're consistently ranked one of the top hospitals in the United States by *U.S. News & World Report*.

Our experience, expertise, and ongoing commitment to innovation and compassionate care are reasons why patients from around the world travel to Children's Hospital for transplantation, cardiac care, brain care, ophthalmology services, and more.

At Children's, patients and families from the Middle East find a welcoming medical community that provides outstanding care, frequent communication with referring physicians in their home country, appointment and checkup scheduling, discharge planning, and follow-up — all in a culturally sensitive environment. We call it PassportCare.

To refer a patient or seek a consultation, contact our International Services team at +1-412-692-3000, or by email at international@chp.edu.



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Hospital of Pittsburgh
of UPMC

United States | Italy | Ireland
4401 Penn Ave., Pittsburgh, PA 15224

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Middle East Health is published by PDS Ltd, Cutlass House,
Wickham Quay, Tortola, British Virgin Isles.

Middle East Health website

www.MiddleEastHealthMag.com



What's Driving the Growth in North American International Patient Services?

You may have noticed over the past couple of years that an increasing number of North American medical centers are promoting their services to patients in the Middle East region. In this issue alone, there are twelve featured and/or mentioned in ads and editorials. **Ruthy Khawaja** reports.

Not since the late 1990s have we seen such a number of providers establishing or expanding programs that target consumers in the Middle East world. The realities and uncertainties in the U.S. health care space have renewed some organizations' interest in the international market. Patients continue to travel to North America for specialized care and now have more options than ever.

Patient Referral Remains Strong

Although access to quality healthcare in the Middle East is significantly improved, the number of patients treated in North America, as reported by consulates (in the US) and hospitals alike, remains strong.

Complex cases are often referred out of country for second opinion or treatment, with enhanced follow-up and continuity of care upon return. Pediatric specialties

in particular remain in high demand due both to young populations and lagging capacity. The region does not yet have super specialty pediatric hospitals due to complexity of both set-up and operations.

One reason for the continued travel out of the region for medical care may be that advancement in local medical capabilities is leading to increased and earlier diagnoses of major diseases. Whether in

the private or public sector, you can find the latest medical technology and ongoing efforts to attract and retain competent staff. Collaboration with centers around the globe is also facilitating knowledge transfer and adoption of best clinical practices. While some may be frustrated by the pace of development, the reality is that all these factors have resulted in positive impact upon local health care.

Likewise, the availability of sophisticated technology is only one aspect of advanced medicine in North America. The massive investment in research, specialty training, nursing excellence, focus on safety, and patient experience are all parts of the platform for advanced clinical care. Outcomes measurement and benchmarking keep Academic Medical Centers focused and in a constant state of innovation and performance improvement. When it comes to complex and quaternary care, they serve as the referral hubs both within their country and globally.

Market Shifts

North American centers are ramping up their international programs for several reasons.

First, a significant segment of international patients from other major markets, such as Latin America, is shifting to commercial insurance. Patients are now able to access many providers across North America through global insurance networks affiliated with major North American insurance companies. The reimbursement rate for services covered by these international policies is lower than traditional self-pay and more comparable to domestic commercial rates.

That is not (yet) the case for patients from the Middle East region who remain largely covered by their governments, companies, or self-pay. While hospitals and providers do extend discounted rates to these clients, especially for those who are paying the costs themselves, the reimbursement is still higher than insurance. The reason for the differential is partially due to the fact that rates for internationally insured patients are often part of a larger policy negotiated with



Accountable Care Act

The Accountable Care Act, frequently referred to as “Obamacare”, is a law that will require all residents in the United States to have some type of medical care coverage. This can either be through an employer or purchased directly through a “Marketplace” that links patients to various plans offered by commercial companies.

The ACA aims to provide access to “affordable” healthcare plans for the 15% of the U.S. population that is uninsured (according to the US Census Bureau). They are typically working class families and individuals who are considered low-income but not “poor enough” to qualify for public assistance. They do not have health benefits through their employer and cannot independently afford the cost of medical insurance. The government will subsidize this ACA initiative and is therefore keen to ensure that the system is efficient and effective for all stakeholders.

The interesting thing about ACA is that it will transfer the risk from consumers, employers, health care plans and government payers to physicians, medical groups, hospitals and other providers. Hospitals reimbursement will shift from a fee for service structure to pay for performance (higher payments and incentives for providers

with measureable high quality), bundled payments (single payments to be split by physicians and hospitals for episodes of care), shared savings (savings from reduced cost of care to be shared with providers) and so on. The value of expanded coverage is not likely to make-up for the impact of these changes on the bottom line. They will simply have to take care of more patients with fewer resources.

Consequently, hospitals are now analyzing how the ACA will affect their individual organizations and implementing adaptive strategies. They have refocused their efforts internally to determine how they can reduce cost and waste, and what services add value. They are analyzing how to standardize services, lower cost, and improve customer service.

Even as the “Marketplace” opened for business on October 1st, there is still disagreement in government around ACA support and overall funding, and much confusion in the public. Nevertheless, it is a law that will cause dramatic changes in the health-care field in America. Providers will be rewarded and penalized on performance, consumers will have access to insurance but penalized if they don't participate, and the true and long-term impact on population health and outcomes of care remains to be seen.

leverage of millions of covered lives.

The trend toward international insurance has caused a significant change in the revenue portfolio of the historically dominant centers in North America, causing

them to increase their emphasis on maintaining and growing volumes from more lucrative regions.

Second, there is the ambiguity and anticipated impact of changes in the struc-

ture and payments mechanisms imposed by the U.S. Government through the Affordable Care Act (ACA). Medpoint Health Partners Advisory Services are observing two kinds of reactions from organizations we work with: either a singular focus on core domestic work and elimination of programs that may be a distraction, or a focus on alternative and innovative programs that may be opportunities to lessen the impact of ACA on the bottom line.

In other words, programs, such as international services, that typically require a special infrastructure and additional resources and do not serve a provider's direct community may be seen either as an unnecessary distraction or necessary diversification. Depending on the history, leadership, and composition of an organization, it can go either way.

Finally, for major centers, international engagement is not an option, but a strategic imperative. Global brand recognition adds value not only by attracting international patients to a destination but also national patients and high profile physicians and researchers. The most prominent medical centers are engaged in global healthcare through research, education, and patient care. Being able to organize and showcase this portfolio is important for recognition by peers domestically and abroad.

The fact that only a handful of North America's top-tier centers dominate the space in the Middle East world can be irritating to other aspiring (and equally excellent) centers in North America. However, those dominating brands have achieved status in the Middle East world through consistent presence, investment and collaboration over many decades. They are the ones that were for the most part not deterred by the economic ups and downs and geopolitical climate in the wider region. These players remained locally visible with visits, events, market-


ing, and even physical presence. Some have organized subsidiaries and deployed management executives to operate facilities on behalf of private and public hospital owners. Even direct investment in regional projects is now being discussed in some AMC board rooms, which, until recently was near impossible.

New Entrants Thoughtful Approach

Medpoint Health Partners Advisory Services' observation thus far is that new entrants are most interested in niche areas and have focused their attention and marketing resources accordingly. They can focus on a service line or few specialties, or may even consider promoting only a specific procedure that differentiates them. Those who have relationships in the region or experience caring for patients from other parts of the world will have some advantage as they reach out to develop stronger ties with the Middle East Arab world.

There are a number of superb institutions whose specialty clinical services are outstanding, but the administrative infrastructure and services necessary for patient/payer relations may be lacking. Some institutions incorporate these elements early in their efforts, which may demonstrate understanding and commitment for the long term. It would be good for patients and payers alike to look carefully at both the clinical services and operational capacity of new providers.

The Author

Ruthy Khawaja is President of Medpoint Health Partners is an independent healthcare advisory and management company based in the United States. The company works with both Academic Medical Centers and international clients on projects ranging from short-term consulting to long-term development and operations management. 



TRANSFORMING OUTCOMES WHILE TRANSCENDING BORDERS.



To see how we can transform outcomes for your pediatric patients, contact International Services at 816-701-4524 or international@cmh.edu. To learn more, visit childrensmercy.org/internationalservices.



There's a reason why the reputation of Children's Mercy extends well beyond the United States. Our noteworthy accomplishments have made the rounds among hospitals and physicians across the globe. We're known for providing outstanding multidisciplinary, patient-centric pediatric care, pioneering the latest breakthrough research and clinical trials, and empowering the next generation of health care providers with a rich education.

We have a longstanding history of partnering with physicians near and far, receiving requests from more than 36 different countries. Right now, we're collaborating in surgery, cardiology, neurology, genomic medicine, hematology and oncology, teleradiology and telemedicine.

Our Children's Mercy International Services team ensures that the children and families who walk through our doors receive complete, individualized care no matter their country of origin from the moment they enter our hospital to the moment they are released, and beyond. We're dedicated to improving outcomes for all children, so they may grow to enjoy life to the fullest.





Children's Mercy Center for Genomic Medicine Unravels the Mystery of Genetic Diseases



Stephen Kingsmore, MB, ChB, BAO, DSc, FRCPath, Director of the Center for Pediatric Genomic Medicine at Children's Mercy



There can be many mysteries a physician must attempt to solve when it comes to diagnosing a child's illness. Those presented by abnormalities in the genes can be some of the most complex. With 8,000 genetic diseases, the clinical detective work can call for a vast array of tests which can stretch into years without ever cracking the case.

The Center for Pediatric Genomic Medicine at Children's Mercy in Kansas City, Missouri, USA, was created to help unlock the mysteries of pediatric genetic diseases. The Center's diverse team of specialists are developing new, better and faster ways of diagnosing genetic causes of disease and changing the way medicine is practiced around the world.

The first of its kind to be located inside a children's hospital, the Center for Pediatric Genomic Medicine is also the first in the world to focus on genome sequencing and analysis for inherited children's diseases.

"Genetic diseases are different. They are a mistake in the code," says Stephen Kingsmore, MB, ChB, BAO, DSc, FRCPath, Director of the Center for Pediatric Genomic Medicine at Children's Mercy. "Identifying those mistakes can be difficult. But once you have a diagnosis, you have a target and then the focus can be treatments and outcomes. We're working to help get to that point quicker."

Dr. Kingsmore had the vision for the Center years ago but struggled to find the right partner to make it a reality until he met with

the leadership team at Children's Mercy.

"They understood the vision of what we could do with this type of technology and how it could help advance the treatment of children overall," says Dr. Kingsmore.

To ensure the highest quality testing the Center for Pediatric Genomic Medicine features a multidisciplinary team. This includes board-certified clinical molecular geneticists, genetic counselors, bioinformatics experts, and pediatricians representing every subspecialty at Children's Mercy. They work in conjunction with computer engineers and software developers to produce information which helps physicians effectively order and interpret tests.

Working with the most advanced technology and scientific knowledge, the Center is already developing new genome analysis and computation capabilities to improve diagnoses and improve care for pediatric patients. Two key offerings include the Targeted Gene Sequencing and Custom Analysis (TaGSCAN) test which focuses on more than 500 genes known to cause severe disease with childhood onset and the STAT-Seq genome analysis used to provide results in hours rather than weeks for acutely ill neonates.

The focus and speed of these tests and other information provided by the Center can be of great importance to doctors. Providers who have been conducting multiple, potentially costly, tests over long periods of time to determine the cause of

an illness can finally get answers. Having a diagnosis allows the provider, patient and parents the information necessary to make important health care decisions.

Dr. Kingsmore sees genomics as the future of medicine and wants to continually push the envelope to integrate it into patient care. His goal for the Center is to figure out new way to make the tests faster, cheaper, better every six months.

Children's Mercy is already working in collaboration with health care professionals and industry partners internationally to provide testing and expand diagnostic capabilities.

"What we are learning and developing at Children's Mercy today helps kids everywhere," says Dr. Kingsmore. "We're not just helping a few, but developing a whole new way of practicing medicine."

● For more information on genomic medicine and other international services offered by Children's Mercy in Kansas City, contact International Services +1 816-701-4524 or send an email to international@cmh.edu

More than 90 countries trust in our world-class care.

We care for children from around the world and have a reputation built on our groundbreaking research and deep understanding of the treatment and diagnosis of complex and rare diseases. It's no wonder *U.S. News & World Report* recently ranked us:



- #1 for cancer care
- #3 on the Best Children's Hospitals Honor Roll
- Ranked in all 10 pediatric specialties

To refer a patient or learn more, please call us in the United States at 001-513-636-3100, email us at international@cchmc.org or visit cincinnatichildrens.org/international.



*Sultan, a colorectal and urology patient
from United Arab Emirates*

A patient-centered, research-driven health system for the future

More than a century ago, Johns Hopkins revolutionized American medicine with the opening of The Johns Hopkins Hospital (1889) and the Johns Hopkins University School of Medicine (1893) by integrating patient care, medical research and education – the gold standard for modern academic medical centers. Today, the flagship hospital is part of a \$6.5 billion integrated global health enterprise featuring six hospitals, multiple primary and specialty care facilities, and managed care and home care providers, in locations spanning Maryland, Washington, D.C., and Florida.

World-renowned experts come together

From genetics to stem cells, from cancer to neuroscience, Johns Hopkins doctors, researchers, nurses and technicians are in the vanguard of their fields. Together they work as a unique team to treat complex illness from all perspectives.

Discoveries move quickly to the bedside

Generations of Johns Hopkins researchers have worked tirelessly to unravel the mysteries of disease, push the boundaries of medicine and develop breakthrough treatments that change lives. When discoveries are made, our scientists move rapidly to apply them to the care of people who are suffering.

Future leaders come to learn

Our revolutionary “Genes to Society” medical school curriculum prepares the next generation to practice the personalized medicine of the future. This unique approach integrates all variables in a human being – from genes and cells to the influence of society and environment.

Knowledge is shared around the world

Part of our mission is to take what we’ve learned and share it with a powerful network of colleagues around the world to help raise the standard of health care everywhere. We do this through multifaceted strategic collaborations spanning nearly every region of the globe.

Customized care for international patients

Johns Hopkins Medicine International’s care team is made up of care experts from more than 30 countries who serve international patients and their families. They provide the highest level of service in a compassionate, discreet and respectful manner. This dedicated team seamlessly combines patients’ medical needs, individual preferences and cultural, linguistic and religious expectations into a tailored experience that makes Johns Hopkins feel as close to home as possible. A medical concierge team serves as the patient’s personal liaison to Johns Hopkins before his or her visit to offer guidance and coordinate medical services and appointments, and accommodations.

Cancer

At Johns Hopkins, research scientists and clinicians work closely together. This allows new drugs and treatments developed in the laboratory to be transferred quickly to the clinical setting and offers patients constantly improved therapeutic options. World-renowned pathologists can identify cancer cells at a much earlier stage of diagnosis, ensuring the best outcomes. Surgeons and oncologists work together to develop the best course of treatment. The center also features many one-day, multi-specialty clinics that offer patients com-

prehensive diagnosis, staging and treatment planning – in a single day.

Subspecialty programs for adults and children include:

- Blood and bone marrow cancers
- Brain and spinal tumors
- Breast cancer
- Colon cancer
- Gynecologic oncology
- Head and neck cancer
- Liver cancer
- Lung cancer
- Melanoma
- Pancreatic cancer
- Pediatric oncology
- Prostate cancer and other genitourinary cancers

Johns Hopkins All Children’s Heart Institute (Florida)

- Experts in fetal-perinatal cardiology, pediatric cardiology and cardiac surgery, including heart transplantation, complex heart surgery and innovative minimally invasive approaches
- State-of-the-art operating rooms, cath labs perioperative services
- 22-bed cardiovascular ICU features individual patient rooms
- Multidisciplinary team of heart surgeons, cardiologists, cardiac anesthesiologists, pediatric intensive care specialists, compassionate nursing staff and other specialists
- Comprehensive diagnostics, from fetal echocardiography to cardiac MRI
- Extensive research in cardiac outcomes

The Johns Hopkins Hospital, Baltimore, Maryland

124 years of expertise, hospital of the future

- 2013: Ranked #1 in the United States by U.S. News & World Report
- Only hospital to be ranked #1 for 21 years in a row
- Two new state-of-the-art care buildings designed to improve every aspect of the

health care experience – from the latest technology to a supportive environment for families

- Centers of excellence in cancer, heart and vascular, neurology and neurosurgery, ophthalmology, orthopedics,

pediatrics, transplantation, urology, and ear, nose and throat

- 1,059 patient beds and 2,000 full-time attending physicians
- Convenient to shopping, dining, entertainment and other major East Coast cities



Heart & Vascular

World-renowned cardiologists and cardiac and vascular surgeons at the Johns Hopkins Heart and Vascular Institute provide comprehensive care of the highest quality, ensuring that patients receive the most advanced treatments known to medicine:

- Dana and Albert “Cubby” Broccoli Center for Aortic Disease
- Cardiomyopathy and Heart Failure Center
- Center for Inherited Heart Diseases
- Ciccarone Center for the Prevention of Heart Disease
- Electrophysiology and Arrhythmia Service
- Hypertrophic Cardiomyopathy Center
- Comprehensive Marfan Center
- Comprehensive Cardiothoracic Transplant Center
- Ventricular Assist Device Service
- Women’s Cardiovascular Health Center

Neurology & Neurosurgery

Johns Hopkins Medicine improves the lives of patients by sharing ideas across disciplines and joining forces to develop the strongest individualized treatment plans – this is truly what sets Johns Hopkins apart from any other medical institution. U.S. News & World Report ranks Johns Hopkins as #1 in neurology and neurosurgery in the country. Patients come to Johns Hopkins from around the world to receive cutting-edge treatment for:

- Acoustic neuroma
- Aneurysms
- Brain tumors
- Cerebrovascular disease

- Glioma
- Hydrocephalus
- Meningioma
- Pediatric brain and spinal cord tumors
- Pediatric neurovascular disorders
- Pituitary disorders
- Skull-base tumors

- Spinal cord injury, spine disorders and spine tumors
- Trigeminal neuralgia

For appointments, trip planning and more: +1-443-287-6080

jhicare@jhmi.edu

hopkinsmedicine.org/international 



All Children’s Hospital, St. Petersburg, Florida

State-of-the-art pediatric care for 87 years

- One of the largest pediatric cancer centers in the southeastern U.S.
- 2010: Pediatric Patient Safety Award from HealthGrades
- Centers of excellence in neonatal intensive care, cardiology and heart surgery, cancer and blood disorders, bone marrow transplant, surgery, neuroscience,

immunology, genetics and cystic fibrosis

- 259 inpatient beds and 250 active medical staff

- Accommodations and amenities for families, designed to provide a healing environment

- Close to St. Petersburg waterfront, plus hotels, restaurants and shopping

Collaboration Meets Innovation



Year after year, Boston Children's Hospital, a Harvard Medical School teaching affiliate, garners top ratings from *U.S. News and Report*. Equally impressive, according to feedback from physicians and families of international patients, is our commitment to collaboration. Boston Children's solidifies its role as a worldwide leader in pediatric care with unparalleled investment in research and innovation.

Cancer care

Dana-Farber/Boston Children's Cancer and Blood Disorders Center, an integrated pediatric hematology and oncology program, combines the services of a leading cancer and blood disease center and a leading pediatric hospital in one specialized program.

We pair a family-centered approach that addresses the unique needs of each child and his or her family with cutting-edge, science-driven care. Our team is constantly innovating to improve treatments of cancer and blood diseases, particularly hard-to-treat conditions like relapsed leukemia, certain brain tumors and neuroblastoma.

Cardiac care

Boston Children's Heart Center is comprised of a top-ranked team of 500 experts that treats the full spectrum of cardiac disorders.

Families from across the world travel to Boston Children's for cardiac care, because we provide the most advanced medical and surgical treatments, exceptional outcomes, and groundbreaking innovations and discoveries. We also foster close relationships with families.

The Heart Center is committed to minimally invasive treatment approaches, including catheterization over open-heart surgery, heart valve repair rather than replacement and medical management. Patient care begins before hospital admission and continues long after discharge and isn't limited by age. We care for patients of all ages from babies still in the womb to adults.

Orthopedic care

Boston Children's Orthopedic Center, the

largest pediatric orthopedic center in the U.S., includes 13 subspecialty clinics. We offer the full spectrum of care for orthopedic conditions, developmental disorders, as well as congenital, neuromuscular and post-traumatic problems of the musculoskeletal system.

The center features an onsite brace shop, plaster room and an interdisciplinary team that employs a collaborative approach to the physical and psychological challenges facing our patients.

Recent innovations include a Spinal Program with extensive experience treating infantile scoliosis, success with the VEPTR™ (vertical expandable prosthetic titanium rib) procedure and pioneering use of adjuvant chemotherapy and limb salvage surgery for patients with osteosarcoma.

Neurology

Boston Children's Brain Center prevents and treats the most common and complex childhood brain and nervous system diseases, as well as injuries and mental health conditions. Our experienced clinicians are dedicated to delivering outstanding pediatric



care and family support.

Our clinical offerings include a Brain Tumor Program with access to the Northeast Proton Therapy Center and national recognition as a Level 4 Epilepsy Center.

Urology


Boston Children's Department of Urology, the largest pediatric urology program in the world, evaluates, diagnoses and treats infants, children and adolescents with disorders of the genital and urinary organs.

We have been at the forefront of pediatric robotic surgery, which has made it possible for surgeons to perform complex procedures, including pyeloplasty, bladder augmentation surgery and ureteral reconstructions through small incisions. These approaches reduce pain, recovery time and hospital stays.

Gastroenterology

Boston Children's Division of Gastroenterology, Hepatology and Nutrition is the largest in the world and offers a team that specializes in the evaluation and treatment of a wide variety of diseases. We strive to develop individual care plans to meet patients' medical and emotional needs, as well as their family's needs for information, support and assistance.

World-class international health services

Boston Children's International Health Services offers a dedicated team that embodies a collaborative care model and delivers access to state-of-the-art medical services. We're focused on making treatment as comfortable and convenient as possible for physicians, patients and families. Our goal is to offer the specialized services to meet the unique needs of each and every international patient while partnering with the home country medical team. 

Spotlight on Innovation

Boston Children's Hospital has a rich history of innovation, which has been formalized via its Technology and Development Innovation Office (TIDO) and the Innovation Acceleration Program (IAP). A small sample of recent innovations includes:

- use of electroencephalograms to detect autism as early as six months of age
- launch of a Hand Transplant Program
- research into use of urine-based biomarkers to diagnose and assess brain tumor status
- development of a robotic device that can be paired with 3D echocardiographic imaging and tiny tools to enable surgeons to perform beating heart surgery on children's hearts

AN UNSURPASSED WORLDWIDE
REPUTATION FOR THE TREATMENT
OF LYMPHOMA.

One IN THE WORLD

From five continents and all 50 states, patients and their families come to one medical center known for lymphoma treatment and research, and bone-marrow and stem-cell transplantation. Recognized by *US News and World Report* and the National Cancer Institute as one of the best in cancer care, this is the program where many of the early advancements occurred that have helped this field grow.

When it's your family, there is only one.



JAMES O. ARMITAGE, MD
Program Founder and Lymphoma Specialist



JULIE M. VOSE, MD
Chief, Hematology/Oncology

For a first appointment
or second opinion.

The Nebraska Medical Center
International Healthcare Services
Phone: +1 (402) 559-3090
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UNIVERSITY OF NEBRASKA
MEDICAL CENTER

Canada's Hospital for Sick Children – Emphasizing International Education

As one of the world's most renowned paediatric health-care institutions and Canada's leading centre dedicated to advancing children's health, The Hospital for Sick Children (SickKids) in Toronto, Canada also takes its role in education very seriously.

SickKids' affiliation with the University of Toronto and its status as an academic teaching hospital provide promising opportunities for its staff. The world's best health-care professionals are attracted to SickKids' international reputation, top-tiered clinical care, groundbreaking research and collaborative environments.

That environment was on full display on September 17, 2013 as SickKids celebrated the official opening of the Peter Gilgan Centre for Research and Learning, a \$400 million tower that is believed to be the largest child health research tower in the world.

This investment demonstrates the Hospital's commitment and dedication to paediatric research and learning, as nearly 2,000 researchers, trainees and staff will be working at the new centre.

"This building, and the activities that will take place within its walls, symbolize our promise to continue the strong legacy of science, discovery, innovation and learning at SickKids," says Mary Jo Haddad, President and CEO at SickKids, of the Gilgan Centre.

This focus on learning, education and research is also seen through the programs and activities run by SickKids International, which has a vision to engage in global opportunities to enhance child health and build system capacity.

International Learner Program™ (ILP™)

SickKids International extends the institution's commitment to education on a global scale, offering education and training to health-care professionals around the world. Two of its integral programs are the International Learner Program™ (ILP™) and Continuing Education.

The ILP™ was launched in 2009 and has been incredibly effective at providing

experiences for the learning requests of health-care professionals looking to build on their paediatric expertise. It also includes unique learning opportunities that incorporate hands-on training along with supervised patient care visits.

Since the launch of the program, SickKids has hosted over 100 International Learners from more than 30 countries, encouraging each learner to apply the knowledge gained, back in their home country.

■ "Everything was clearly explained to me. I received material and literature reviews that facilitated my learning experience while I was at SickKids and after I returned home", said an international learner from Saudi Arabia.

"I have learned a lot here at SickKids," said an international learner from Japan. "The staff are incredibly kind to the patients and families, and to international learners. I really cherish the experience I have had at SickKids and will take back all I have learned to my own hospital."

International learners develop their own learning objectives and are given personalized evaluations, along with assessments given nine months to a year later that provide them with the opportunity to reconnect with their mentor and follow up on their objectives.

"Everything was clearly explained to me. I received material and literature reviews that facilitated my learning experience while I was at SickKids and after I returned home", said an international learner from Saudi Arabia.

Continuing Education and Other Opportunities

SickKids International also works closely with organizations from around the world to customize curricula to each of their

strategic and specific learning needs. They help develop, implement, and evaluate collaborative continuing education programs.

These programs are delivered either through in-person sessions at SickKids or in the partners' home countries. Courses can also be modified and offered via video-conferencing, web or alternative means for international clients with travel limitations. The programs are run with the learners' convenience and needs in mind! Topics include clinical care, faculty development, leadership and research.

"I am proud of the work that we do here at SickKids International. It is truly rewarding to see our educational programs being adapted to our partners' specific needs and having a significant impact on the delivery of care to children and families worldwide," says Lara Pietrolungo, Director, International Education at SickKids International.

SickKids International also partners with academic institutions to develop course content to address the interests of learners that lie outside existing curricula. This also helps provide the combined delivery of continuing education with the ILP™ experience. It aids the international learner by enhancing their learning with professional development and academic course offerings relevant to their role and responsibilities.

● For more information on the International Learner Program™ please visit www.sickkidsinternational.ca/ILP or email ilp.requests@sickkids.ca

■ "I have learned a lot here at SickKids," said an international learner from Japan. "The staff are incredibly kind to the patients and families, and to international learners. I really cherish the experience I have had at SickKids and will take back all I have learned to my own hospital."

World-Class Care. First-Class Service.

Discover Why Patients from Across the Globe Choose St. Luke's in the Texas Medical Center

Leaders at Heart

With a proven track record that includes more than 100,000 open-heart procedures and 1,000 heart transplantations, we have been ranked¹ as one of the top 10 hospitals in Cardiology and Heart Surgery for 21 consecutive years.

Cancer Care Services

Accredited by the Commission on Cancer of the American College of Surgeons and recipient of the Outstanding Achievement Award for top performance, St. Luke's Cancer Center offers patients the best in personalized cancer care within a private hospital setting. Experienced physicians employ a full range of leading-edge diagnostic technologies and standard-of-care and effective therapies for patients.

Neuroscience Center of Excellence

St. Luke's offers the only Neuroscience Center of Excellence² in the Texas Medical Center where patients have access to some of the latest and most advanced options in the evaluation, treatment and long-range management of neurological diseases.

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¹ U.S. News & World Report

² NeuStrategy, Inc.

The Only #1 Hospital for 23 Years Straight

The Rehabilitation Institute of Chicago (RIC) has once again been named the #1 rehabilitation hospital by *U.S. News & World Report* – a recognition unmatched by any hospital of any kind anywhere in the United States.

RIC provides fundamentally different care than any other hospital, serving the largest number of the most complex patients and treating a wide range of conditions from stroke, traumatic brain injury and spinal cord injury to cerebral palsy, cancer related conditions and other neurological disorders. Each year they treat over 50,000 patients from more than 70 countries throughout the world.

The world's best research directly impacts recovery

The future of medicine is the integration of researchers, scientists and clinicians working together in the same space. RIC is leading this future with the development and implementation of their new 'AbilityLab™'. This innovative model of care allows the staff to share findings with patients and their care team in real time enabling them to solve problems faster and achieve greater outcomes.

RIC holds an unparalleled research distinction with a record eight, multi-year, multi-million dollar federal research designations. Currently there are also more than

All medical centers say that they marry research and patient care, but very few are willing to make the enormous investments and changes – including physical design changes – to make that happen. The design of the new hospital removes the barriers that prevent sharing across large complex organizations. – **W. Zev Rymer, MD, PhD, Vice President of Research at RIC**

350 clinical studies underway dedicated to improving treatments and creating better outcomes for patients. Highlights of a few include:

● **Bionics** – *New England Journal of Medicine* recently published a paper on the world's first thought-controlled bionic leg. Developed by an integrated research team at RIC, this leg learns and performs activities unprecedented for any leg prosthetic.

● **Robotics Lab** – RIC uses assistive devices to facilitate finger extension, grasp and hand recovery. Used with clinical therapists in a virtual reality environment, researchers are advancing new treatments for stroke patients affected by hand weakness and paralysis.


● **Non-Invasive Brain Stimulation** – This technique tests whether brain stimulation reduces inappropriate nerve impulses to the injured side of the brain, ultimately improving hand and arm movements.

● **Motion Analysis Center** – Monitoring and analyzing gait and upper extremity function during daily activities enables researchers to assist patients with cerebral palsy, spina bifida, spinal cord injury, and many other conditions.



The Ability Institute of RIC – Opening 2017

This year marked a historic milestone in the history of the Institute as they broke ground on their new research hospital. Scheduled to open in early 2017, many believe that this is more than just a new hospital – it's a whole new way of looking at medicine. It will establish a new paradigm of translational research and clinical care and an extraordinary unification of researchers, clinicians, patients and technology. Five new Innovation Centers will be established within the hospital that will each apply new and promising treatments to help improve and eliminate the effects of impairments in the human brain, spinal cord, nervous system and limbs in adults and children. These innovation centers will focus on the dominant organ-system and its molecular and cellular basis of function and recovery. By focusing on how cells and organs respond to interventions designed to promote movement, function and medical recovery, they will advance knowledge, create new standards and disseminate these findings across the world. AbilityLabs™ will also be created to further infuse 21st biomedical science into the clinical environment and align therapies with core functionalities: Think & Speak, Arms & Hands, Legs & Walking, Coordination & Endurance and Pediatrics. To learn more about the new hospital or how you can be a part of bringing this vision to life, visit their website at: www.advancehumanability.org.

● RIC's Global Patient Services department is available to help answer your questions and support your patient referrals. For more information, visit www.ric.org or to speak with one of our GPS representatives about making a patient referral call +1.312.238.1188 or email: international@ric.org 

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Issam A. Awad, MD
Neurosurgeon
Director, Neurovascular Surgery



The Focus Shifts to Collaboration and Sharing Expertise in Pediatric Healthcare

■ By **Harun Rashid**,
Chief Information Officer
and Vice President of Global Services,
Children's Hospital of Pittsburgh of UPMC

In today's multifaceted pediatric medicine arena, advanced care for complex medical issues can be found outside the borders of many counties. With a depth of expertise and experience often not available internationally, physicians in North America are leading the way in providing quality outcomes and coordinated clinical care of innovative procedures

and treatments for children worldwide.

Traditionally, many physicians have found they must refer their patients to hospitals in the United States and Canada for treatment of complex pediatric care. This can be an expensive and exhaustive process for families who must uproot their lives for weeks and months at a time in exchange for proven positive medical outcomes.

The tides are changing in pediatric health care as the focus shifts to collaboration and sharing of expertise with an emphasis on coordinating all aspects

of patient care as physicians seek access to the latest treatment modalities. With the introduction of new technology, advanced medical procedures, and inventive ways to share expertise, exciting changes are taking place in the way pediatric medicine is being practiced in the United States and internationally.

Treatment of Rare Diseases

Physicians treating children with rare diseases, such as neurodegenerative, metabolic and liver disorders, often find that

they are in a unique position to provide advanced care compared to international centers that may only treat a small number of specialized patient issues. Rare disease centers in the United States are concentrating efforts on treating specific diseases, offering physicians who are experts and world renowned for their treatment of those disorders.

With rare diseases, it is difficult to find one doctor who is an expert on all diseases. Instead, physicians in these centers offer an unparalleled expertise, intense research, and better care of patients because of the concentration of similar patients with in one place. The focus in these centers is often on finding unique and complete therapies that may not always be the standard of care, such as experimental protocols and new treatments for disorders.

For instance, the Center for Rare Disease Therapy at Children's Hospital of Pittsburgh of UPMC consists of international experts committed to treating children who are diagnosed with inherited metabolic disorders and their related diseases including inborn errors of protein metabolism, immunity, lysosomal metabolism, energy metabolism and bile formation. Because of this specific focus and the relatively large number of patients seen, the hospital is uniquely positioned as an international leader in evaluating, diagnosing, and treating these very specific metabolic disorders. Also, Children's Hospital has pioneered liver transplantation as a treatment and cure for metabolic disease, having transplanted more patients with metabolic disease than any other center, including adult facilities.

One of the breakthroughs in this model of identification and care is the ability to personalize applications to the patient to make the right diagnosis, follow the right treatment, and focus on different effective therapies. In rare diseases, similar to common diseases, there is often a one size fits all mentality. But American centers that are cutting edge are studying the variables of each disease, treating each patient and his or her specific diagnosis differently. This individualized approach is based on the most sophisticated research and treatment, which results in an expedited diagnosis, individualized therapy plans based on the particular patient, and ultimately the best care possible.

Within the realm of innovative diagnosis and treatment of rare disorders is the study of genetics and newborn screening for congenital conditions that, without early management, can result in significant morbidity and mortality. Newborn screening has expanded over the years to include assays for numerous genetic conditions using dried blood spot samples collected from neonates as well as point-of-care testing through other modalities.

Traditional methodology for the genetic diagnosis of rare disorders has changed from identifying one disorder at a time to measurement of multiple compounds with a single test, increasing the number

With the introduction of new technology, advanced medical procedures, and inventive ways to share expertise, exciting changes are taking place.

of disorders identifiable by a single screen. The result is significant as it can reduce the time from the first appointment with symptoms to diagnosis as physicians study 20,000 genes at once instead of one gene at a time. This allows patients to begin appropriate therapy sooner and families to make decisions about treatment and reproductive discussions based on the identification of the disorder.

The next evolution of newborn screening includes proposed testing for both genetic and acquired conditions that require early intervention in the pre-symptomatic stage to prevent devastating complications. This includes disorders of lysosomal enzyme deficiencies that lead to early neurodegeneration, such as Krabbe disease, or neuromuscular symptoms, such as Pompe disease.

Pediatric Transplantation for Metabolic Disease

In the United States, the survival rate for pediatric patients undergoing transplant is among the highest in the world. Because of the high number of procedures com-

pleted every year, highly trained physicians, transplant surgeons and teams across the United States have improved surgical techniques and post-surgical treatment. The volume, knowledge and expertise by physicians at transplant centers are a driving force to the large number of patients who seek care from around the world.

For instance, patients with severe metabolic disorders mentioned previously are now recommended for liver transplantation as a viable treatment option for medical management. Traditionally, liver transplantation had been viewed as a life-saving versus life-evolving procedure reserved for severe metabolic disorders with essentially lethal outcomes. Recent advances by experts who focus on rare disorders have seen success in improving and curing these specialized diseases through transplantation.

On the list of metabolic diseases that can be cured through liver transplantation are maple syrup urine disease (MSUD) and urea cycle disorders. Diseases that can be improved through transplantation include certain glycogen storage diseases propionic academia, and methylmalonic academia. Other diseases that are being studied for further consideration include phenylketonuria (PKU) for hepatocyte transplantation.

With mortality now at near zero, improved outcomes and increased knowledge of metabolic disease, and an increase in the range of disorders suitable for this approach, transplantation as a viable therapeutic option is a distinct possibility for other systemic issues in the future.

In addition to advanced new treatments and procedures, there is also a growing awareness of the need for collaboration of multidisciplinary care groups. There has been increased nationwide attention on developing quality initiatives and tracking good outcomes that can be shared among all centers in the United States. One example of this sharing of best practice can be seen in a current study of pediatric liver transplantation in which a 30-center consortium from around the United States is committed to reporting and sharing their outcomes in an effort to learn from each other so the United States can continue to lead the world in successfully treating metabolic diseases with liver transplantation.



Advancing Telemedicine

As the treatment of complex pediatric medical issues evolves, the need to collaborate with physicians from other parts of the world is becoming more evident. Physicians who are on the cutting edge of innovative research and treatment therapies are anxious to share their knowledge with physicians outside of the United States.

Advances in technology have led to sweeping changes that afford physicians and staff from major medical centers in the United States the opportunity to provide revolutionary, lifesaving and life enhancing care, while sharing their expertise with colleagues worldwide. At the heart of this quest for knowledge sharing is telemedicine.

Beginning more than 40 years ago with demonstrations of hospitals extending care to patients in remote areas, the use of telemedicine has grown rapidly and is now becoming include variety of applications and services utilizing two-way video, e-mail, and other forms of telecommunications technology. New state-of-the-art digital technologies al-

low physicians to not just hear a patient or another physician on the phone, but also to see the patient, review clinical information, and provide very precise information regarding the management of complex pediatric care.

Enhanced telemedicine practices are also being effective in training and knowledge sharing with physicians worldwide as a way to address the shortage of trained physicians in other countries. The technology allows facilities to remotely bring a physician from the United States to them to deliver medical education and provide a proactive approach to practicing medicine internationally. The result is hospitals and health care facilities training physicians in the same skill sets as those in the United States so they can develop long term relationships and continuously improve their patient care.

At the forefront of current and future pediatric medicine in the United States is a continued commitment to provide the most advanced care for patients coupled with inventive ways to openly collaborate and share knowledge and expertise with

Physicians treating children with rare diseases, such as neurodegenerative, metabolic and liver disorders, often find that they are in a unique position to provide advanced care compared to international centers.

colleagues from around the world. With a focus on the latest technology, innovation, and research, patients worldwide will benefit from the coordinated care that increasingly results in a new generation of positive patient outcomes. **MEH**

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St. Luke's Medical Center First to Offer Molecular Breast Imaging

Innovative Technology Provides Accurate Identification of Tumors in Women with Dense Breasts, Implants

St. Luke's Medical Center is the first hospital in the Texas Medical Center to offer a Molecular Breast Imaging (MBI) device that is sensitive enough to detect even tiny tumors. The Discovery NM 750b, from GE Healthcare, is designed to help improve detection of breast cancer, even in women with dense breasts where results of mammography may be inconclusive.

"The Discovery system is an important advancement in the early detection and diagnosis of breast cancer, but for women with dense breasts, it could truly be a lifesaver," said Eric J. Ladwig, Operations Manager, Nuclear Medicine at St. Luke's Medical Center. "Women with dense breasts have an increased risk of breast cancer and this condition can impact the quality of a traditional mammogram. MBI is not affected by breast density, resulting in a clear image and great confidence that the patient is cancer free or truly needs to have a biopsy."

A supplement to mammography, MBI is ideal for the approximately one-third of women who have dense breasts, allowing for detection of three times as many cancers in women with dense breasts than traditional mammography. It also is an option for the roughly 20 percent of patients with pacemakers or other metal devices, and MBI can be an alternative for patients who are claustrophobic, have silicone implants, or whose size prohibits them from an MRI.

According to Ladwig, MBI provides information regarding a patient's diagnosis that is unattainable through other imaging methods and would require more invasive procedures, such as a biopsy or exploratory surgery. Additionally, it can determine the extent of severity of the breast cancer, including whether it has spread elsewhere in the body.

This was the case for Louise, (patient's name changed to protect her privacy) a

patient at St. Luke's Medical Center, who had previously been diagnosed with cancer. She went in for a routine mammogram, and when the results came back, the physician was suspicious of the findings. Unwilling to undergo a biopsy, Louise had the MBI procedure, which confirmed that her cancer had returned. While the news was not what she had hoped, Louise was able to avoid the discomfort of a biopsy.

During a Molecular Breast Imaging procedure with The Discovery, a patient receives a tracer injection that locates metabolically active tumors by blood flow. Since the tumor metabolizes the isotope to a higher degree than normal tissue, it will appear as a "hot spot" on the scan. MBI is a comfortable examination, as only light immobilization pressure is required during studies versus a traditional mammography. Two, 10-minute images are taken of each breast, and radiation levels are comparable to the dose that is delivered from one digital screening mammogram.

The most common cancer in women worldwide, it is estimated that more than 1.6 million new cases of breast cancer occur annually, with developed countries hav-

ing higher rates than developing countries.

Early detection is key, and MBI can help identify breast cancer in its earliest stages and determine the exact location of a tumor, leading to improved diagnosis, the most appropriate treatment regimen, and ultimately help minimize morbidity and mortality rates.

- St. Luke's offers advanced diagnosis, treatment and prevention programs with a specialized, customer-oriented international component. To find out more about St. Luke's International Service or to schedule an appointment, please call 832-355-3350 or email international@stlukeshealth.org Visit: www.stlukeshouston.com MEH





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#3 Gastroenterology & GI Surgery
#3 Ophthalmology
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#4 Cardiology & Heart Surgery

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#4 Nephrology
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The Leading Edge of Medicine

Health care today is complex, sophisticated, and demanding. Procedures that were not even ideas 20 years ago have become commonplace today. New diseases and conditions have been discovered, while old ones mutate posing greater risks. From multiple organ transplants that have never been attempted before, to the development of less invasive, but more technically challenging procedures, health care is ever changing. And in the future, it will change even more.

It's a constant challenge to stay at the leading edge of medicine and meet rapidly changing expectations.

Houston Methodist Hospital in The Texas Medical Center is meeting that challenge.

Methodist is recognized as one of America's outstanding hospitals. Methodist has built a world-class academic medical center that brings together the best of patient care, research, and medical education.

Physicians, staff and volunteers are lead-

ing medicine and giving hope to those who turn to Methodist in their time of greatest need.

Thinking and Acting Boldly

Houston Methodist, throughout its long history, has focused on innovation that directly benefits its patients.

That innovative spirit continues today as physicians and researchers build on the work of legends like Dr. Michael E. DeBakey, who, in his long and distinguished career, singlehandedly raised the standards of medical care.

Houston Methodist is a national leader in the delivery of health care, and others agree.

U.S. News & World Report consistently recognizes Houston Methodist in its annual ranking of "America's Best Hospitals," and this year Houston Methodist was ranked as the "Best in Texas." Also *FORTUNE* magazine has named Houston Methodist as one of "100 Best Companies to Work For" eight years in a row.

Today's best will not be good enough for tomorrow. Houston Methodist physicians, leadership, researchers and staff are pressing ahead toward a greater and grander vision, one that positions Houston Methodist to help shape the future of medicine.

Leading Hospitals

Houston Methodist is comprised of a leading academic medical center in the Texas Medical Center, four community hospitals, free standing emergency care centers, imaging centers and a leading-edge research institute serving the Greater Houston area and beyond. A legacy of medical milestones has attracted patients from around

the world for almost 100 years.

Houston Methodist is committed to providing the finest spiritual care coupled with healing skill, compassion, and respect for human dignity. Houston Methodist Hospital is primarily affiliated with Weill Cornell Medical College and NewYork-Presbyterian Hospital, two of the nation's leading centers for clinical care, medical education and research.

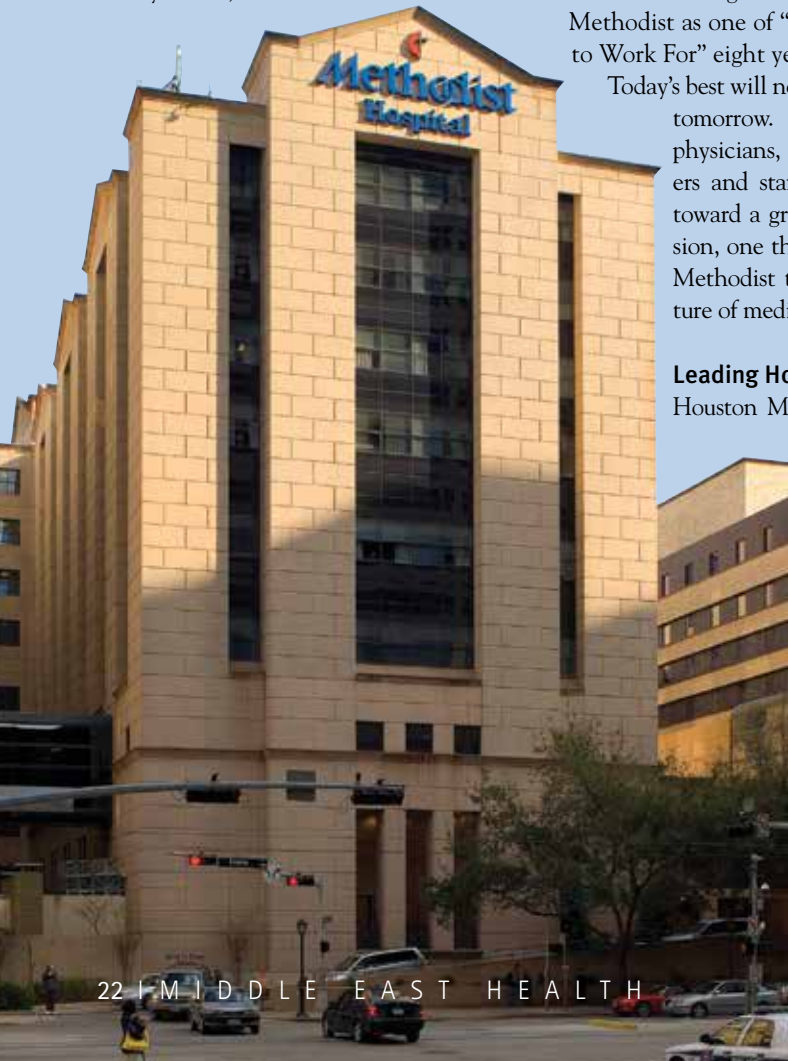
Services and Specialties

Houston Methodist offers primary and acute care for a variety of diseases and conditions as well as preventative care throughout its network of five hospitals, and emergency care and imaging centers.

- Cancer/Oncology
- Ear, Nose and Throat
- Diabetes/Endocrinology
- Digestive Diseases
- Emergency Care
- General Surgery
- Heart and Vascular
- Imaging/Radiology
- Internal Medicine
- Neurology
- Neurosurgery
- Obstetrics and Gynecology
- Ophthalmology
- Oral and Maxillofacial Surgery and Dentistry
- Otolaryngology Head and Neck Surgery
- Orthopedics and Sports Medicine
- Pathology and Genomic Medicine
- Plastic and Reconstructive Surgery
- Rehabilitation
- Robotic Surgery
- Transplant
- Urology
- Weight Management
- Wellness

Houston Methodist is proud to be the official health care provider for the Houston Texans, Houston Astros, Houston Dynamo, Rice Athletics, Houston Ballet, Houston Grand Opera, Houston Symphony and Rodeo Houston.

■ For more information about Houston Methodist or for a physician referral, please call +1-713-790-3333 or visit houstonmethodist.org **MEH**



Advancing Pediatric Medicine with Innovation and Family Centered Care

Throughout its 120-year history, Children's Hospital of Pittsburgh of UPMC has helped define excellence in pediatric medical care and research.

Children's Hospital is one of only 12 pediatric hospitals in the United States named to the Honor Roll of America's "Best Children's Hospitals" for 2012-13 by *U.S. News & World Report*. Also, Children's has been recognized by KLAS, an independent research group, as the number one pediatric hospital in its use of health care information technology.

Located in Pittsburgh, Pennsylvania, Children's opened its new, innovative campus in 2009. The 296 bed hospital was designed with children and families in mind with private patient rooms and many homelike amenities. Additionally, it's one of the most technologically advanced facilities in the U.S. for pediatric medicine.

Clinical services that set Children's apart, include innovations in the neurosciences, cardiac care, transplantation, and ophthalmology.

Brain Care Institute

At the Brain Care Institute (BCI), innovative medical and surgical treatment options are available to help patients afflicted with neurological disorders. The BCI brings together a number of pediatric specialties – including neurology, neurosurgery, neuro-critical care, and neuro-oncology – a unique combination of international specialists all dedicated to the care of children with injuries or conditions related to the brain and spinal cord.

Heart Institute

The Heart Institute is one of the most active and innovative centers for the care of children who are born with or who acquire heart problems. Achievements include:

- One of only two high-volume pediatric cardiovascular programs in the United States with a surgical mortality rate of less than 1 percent, according to data for 2008-2009 compiled by the Society for Thoracic Surgery.
- One of the most experienced centers in the use of the Ventricular Assist Device (VAD), a mechanical heart pump that offers lifesaving support to keep patients alive until heart transplantation or recovery occurs.

First in pediatric transplantation

Children's Hospital established the world's first and largest pediatric transplantation center in 1981 under renowned transplant pioneer Thomas E. Starzl, MD, PhD. The Hillman Center for Paediatric Transplantation has:

- performed more transplants in children than any other facility
- patient survival rates that are among the world's best

Transplant specialties include liver, intestine, kidney, heart, lung, and bone marrow. Children's is also recognized as a leader in transplant-related research and is dedicated to helping patients live longer, healthier lives through scientific study.

World-class ophthalmology Care

Children's Division of Pediatric Ophthalmology, Strabismus, and Adult Motility is led by one of the world's foremost pe-

diatric eye specialists, Ken K. Nischal, MD, FRCOphth. As part of the UPMC Eye Center, it combines best practices and interdisciplinary collaboration to deliver exceptional care for visually impaired patients – from infants to adults.

Groundbreaking research

Children's Hospital's has a rich heritage in pediatric research and today is recognized as one of the fastest growing National Institutes of Health (NIH)-funded pediatric research programs in the U.S.

Experts in telemedicine


Children's Hospital is a leading center for the use of telemedicine services to bring pediatric specialists to hospitals worldwide through high-definition teleconferencing and store-and-forward e-mail consultation.

Children's offers remote physician-to-physician consultation of critical care units to hospitals around the world in need of pediatric intensivists. Video consultations are provided through rounding and care management requests. Children's provides telemedicine consultative services with pediatric cardiac critical care units in various cities in Colombia and post-operative management of pediatric liver transplant patients in Palermo, Italy.

International services

Children's International Services team is available to assist physicians, parents, health ministries, and embassies around the world who are seeking leading-edge clinical services, consultation, education and training, and more. International liaisons are fluent in multiple languages including Arabic, to ensure proficient communication.

Its Passport Care program helps patients and families feel at home until they return home, providing a wide range of concierge services such as assistance with housing, transportation, administration, translation, financial counselling and religious and cultural matters.

■ To learn more about Children's Hospital of Pittsburgh of UPMC, visit: www.chp.edu or contact our International Services team at: +1-412-692-3000 or by email: international@chp.edu. 



A Physician's Curiosity Changed Transplants around the World



Dr. Margaret Kessinger, MD

Dr. Margaret A. Kessinger, Professor, Internal Medicine Oncology/Hematology, Professor, Pathology/Microbiology, recently marked the 30th anniversary of the bone marrow transplant program at the University of Nebraska/The Nebraska Medical Center (TNMC). Over the past several decades, Dr. Kessinger and other prominent oncologists and researchers have led the way developing new methods and procedures to fight blood and other cancers.

They said it couldn't be done. But oncologist Dr. Kessinger paid no mind.

In 1981, bone marrow transplants were just beginning to be used to treat some blood cancers, such as lymphoma and leukemia. In some cases it helped provide a cure. But, for patients whose cancer had invaded the bone marrow, there were no options.

Dr. Kessinger wanted to know if there was another way of collecting stem cells derived from the blood of patients. At the time, the only way to collect stem cells from the bone marrow was to put the patient under general anesthesia then insert a long needle into the hipbone, 100 or more times until enough stem cells were collected to perform a transplant.

A less painful way

Dr. Kessinger felt there had to be an easier and less painful way. She knew peripheral blood stem cell transplants were successfully used in animal models as early as the 1930s and common sense told her that it also could work in humans.

Dr. Kessinger and her colleagues at the Red Cross figured out a way to collect the cells through a special process called apheresis – through veins in the arm much like donating blood. The first peripheral blood stem cell transplant at TNMC was performed in June 1984.

When Dr. Kessinger published the results of the clinical trial she conducted with 10 patients, her article was questioned by the medical community. Her colleagues around the world thought she had either fabricated results or misinterpreted them. At first, the

medical journals would not accept her reports. She eventually proved to the world that her data was correct, conventional dogma was wrong and peripheral stem cell transplantation could work.

The process was effective and enabled the use of peripheral blood stem cell transplantation in humans. The therapy provided a viable alternative and is now standard practice around the world.

Dr. Kessinger, along with her world-renowned colleagues, Dr. James Armitage, Dr. Julie Vose and other TNMC specialists and researchers painstakingly work to make a difference for patients around the globe.

In other groundbreaking treatment options, TNMC participated in the clinical trials for SGN-35, a treatment of monoclonal antibody with chemotherapy attached to it. It works by delivering the chemotherapy directly to the cancer cells and bypasses the normal, healthy cells. The targeted "smart bullet" approach lessens the side effects of the chemotherapy. TNMC oncologists saw the promising results first hand: 73% of the patients had their tumors shrink or disappear.

As one of the four centers in the United States, TNMC also played an important role in the trial of Intrabeam therapy for breast cancer, a type of interoperative radiation therapy (IORT). Instead of six weeks of treatment following surgery, Intrabeam patients have their surgery and radiation in one session lasting about 90 minutes. With solid clinical data showing this approach to be effective, it is now becoming more widely available.

The Fred & Pamela Buffett Cancer Center

With construction underway to build a new US\$323 million The Fred & Pamela

Buffett Cancer Center, a seven-story, 108-bed inpatient treatment center and the ten-story, 98-laboratory research tower, TNMC will be a "beacon of light" for cancer patients around the globe, said Susie Buffett, a leading philanthropist.

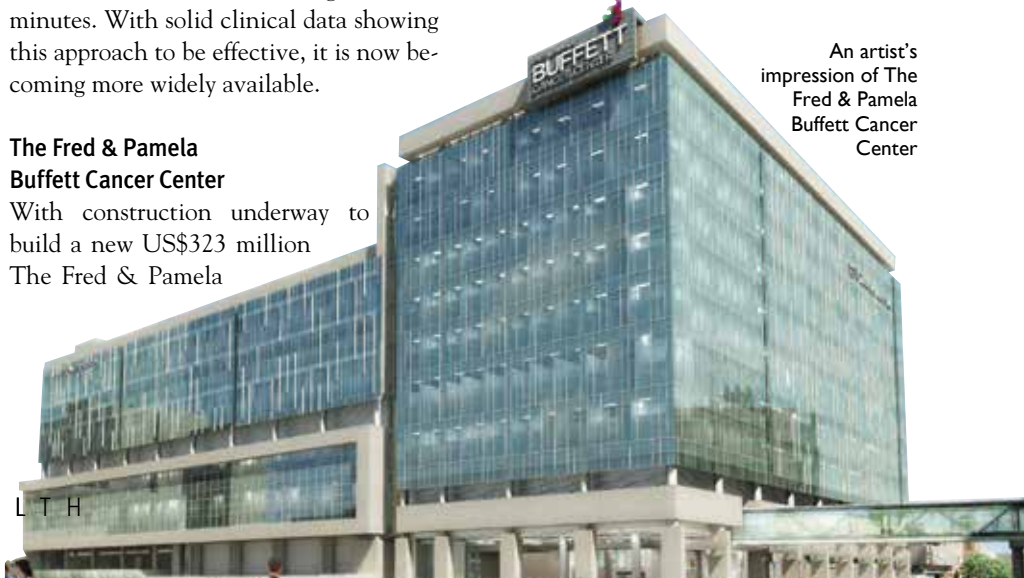
Nizar Mamdani, executive director and founder of TNMC's International Healthcare Services says: "Dr. Kessinger, Dr. Armitage and Dr. Vose are inspiring and remarkable examples of the caliber of specialists and researchers working tirelessly to help provide better cancer care treatment options.

"Through collaborative strategic partnerships with 122 institutions in 44 countries, we continue to provide innovative treatment options, as well as specialized telepathology and second opinion consultation services for cancer care and transplantation patients around the world," says Mamdani.

TNMC also provides no-cost, customized training and educational programs, especially for nurses and allied healthcare professionals. "Through our personalized training programs, we facilitate patients around the globe to be the ultimate beneficiaries of the most advanced treatment options and to empower them to receive the latest treatments in their own home countries," says Mamdani.

● For more information about advanced treatment programs, research, training and education, contact nmamdani@nebraskamed.com. Visit: www.unmc.edu/international Tel: +1-402-559-3656.

An artist's impression of The Fred & Pamela Buffett Cancer Center





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The main campus of Cincinnati Children's Hospital Medical Center

Recognized Internationally for Excellence

Cincinnati Children's Hospital Medical Center is one of the most distinguished medical centers in the United States, recognized nationally and internationally for excellence in patient care, training, education, and research. Clinical procedures and treatments pioneered at Cincinnati Children's are used all over the world, and our research breakthroughs are changing the outcome for children of all ages.

Leader in Clinical Care

Cincinnati Children's is ranked third on the Honor Roll and #1 for cancer care in the 2013-14 Best Children's Hospitals issue of *U.S. News & World Report*.

Leader in Research

Cincinnati Children's is ranked third in National Institutes of Health (NIH) grant funding among all pediatric research programs.

Leader in Pediatric Training

The Department of Pediatrics, affiliated with University of Cincinnati College of Medicine, was ranked in the top three in the United States by *U.S. News & World Report* in 2013.

We train approximately 185 residents each year and offer more than 106 residency, fellowship, and post-doctoral training programs, making our pediatric training program one of the largest and most specialized in the United States.

Areas of Expertise: Programs Attract Patients from All Over the World

Cincinnati Children's has gathered some of the best pediatric subspecialists in the world who collaborate in our multidisciplinary programs to treat the most complex conditions and rare diseases:

- Aerodigestive disorders
- Airway reconstruction
- Bone marrow transplantation
- Brachial plexus surgery
- Rare, high-risk and recurrent cancers
- Cardiomyopathy
- Cardiothoracic surgery
- Congenital heart disease (including adult and adolescent)
- Craniofacial conditions

- Cystic fibrosis
- Colorectal surgery
- Disorders of sex development
- Eosinophilic gastrointestinal disorders
- Epidermolysis bullosa
- Epilepsy and epilepsy surgery
- Esophageal disorders
- Fanconi anemia and bone marrow failures
- Fetal care and fetal surgery
- Genetic evaluations and testing
- Genitourinary health
- Hand and upper extremity surgery
- Heart failure and transplant
- Hemangioma and vascular malformations
- Histiocytosis disorders
- Immune deficiencies
- Inflammatory bowel disease
- Intestinal rehabilitation
- Acute kidney injury
- Liver care, chronic liver disease and transplants
- Rare lung disease
- Motility disorders
- Neurofibromatosis
- Neuromuscular disorders
- Transplantations – bone marrow, heart, intestine, kidney, liver
- Tuberous sclerosis
- Urological reconstruction

Global Health Center


Our Global Health Center works to serve the needs of medical communities abroad through:

- Collaborations with international institutions for education, training and research.
- Our Visiting Physicians Program, a well-organized program that helps with logistics, from acquiring visas to finding accommodations.
- Online CME programs and training opportunities through observation.
- Opportunities for non-clinical training in management, quality improvement and safety.

International Patients: Special Assistance for Patients and Families from Other Nations

Patients have come to Cincinnati Children's for care from 90 countries. Our international patient program offers special services for patients and families who are coming to our hospital from outside the United States. This team makes the entire experience easier for patients, families and referring physicians by helping with obtaining treatment plans, estimating expenses for treatment and working with families to set up payment arrangements. The team also provides interpreter services, assists with documentation required for travel visas and connects visitors with our Guest Services team to assist with lodging, transportation and other services. The international patient program can be contacted directly via email at international@cchmc.org.

Quality and Safety Focus

Cincinnati Children's is focused on transforming healthcare delivery, with an aim to make lasting changes that result in improvements from the point of view of patients and families. We are especially focused on improving patient safety. Our goal is to be the safest children's hospital in the world, and this goal shapes all the work we do. 

International Learner Program™



Learn best practices in paediatric health care

- Designed for international health-care professionals to build on their experience in practice, education, research and administration
- Customized learning opportunities in a world-class paediatric health-care environment
- Observation (for knowledge acquisition) or Practice (hands-on training) experiences available
- Opportunity for Clinical Mentorship in learners' home countries

Advising and educating in paediatric health care

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Toronto, Ontario
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ilp.requests@sickkids.ca
www.sickkidsinternational.ca/ILP



A Hospital for the Future

By **Debi Albert**, RN, MSN, MBA, NEA-BC
Chief Nursing Officer
Vice President, Patient Care Services

The University of Chicago Medicine's new 1.2-million-square-foot hospital welcomed its first patients on February 23, 2013, nearly four years after ground was broken for the state-of-the-art facility. Named the Center for Care and Discovery, the new hospital serves as a catalyst for transforming the patient experience in an environment of top-notch health care professionals, leading-edge technology and innovative medical research.

The Center for Care and Discovery serves as the core for the medical campus, a place where world-class physician-researchers, nurses and other medical professionals can unite their efforts to focus on the prevention, diagnosis and treatment of disease. The 10-story structure is strategically located near the Gordon Center for

Integrative Science and the Knapp Center for Biomedical Discovery, two world-class research facilities that strive to bring fundamental scientific discoveries made in the lab to the patient bedside.

The new hospital is the latest step in a long history of innovation, from development of novel cancer treatments and medical imaging to advances in minimally invasive surgery and organ transplantation. It also underscores the University of Chicago Medicine's mission to provide the best in patient-centric care, with a focus on areas such as cancer, neurosciences, digestive diseases, advanced surgery and high-tech radiology.

The sprawling facility, which covers two city blocks, encourages true multidisciplinary treatment, boasting space for up to 28 operating rooms with integrated diagnostic and interventional platforms for specialty care. Each operating room allows large teams of nursing, medical and

surgical experts to work side by side.

The Center for Care and Discovery also builds on the patient and nurse relationship. In addition to the wide corridors, nursing stations are positioned strategically on various floors to maximize visibility of patients. Nurses also are equipped with modern paging technology to help reduce the noise levels typically found in many hospitals.

The Center for Care and Discovery sets new standards for comfort with 240 inpatient rooms – each private and spacious enough to accommodate families for overnight stays. The rooms, located on the perimeter of the building for greater privacy, feature large windows that provide stunning views of the University of Chicago campus, Lake Michigan, Washington Park and the downtown skyline. Amenities include a large, flat-screen TVs, adjustable lighting, room-darkening shades and soft colors to create a soothing place to heal. **MEH**

HELPING PATIENTS REGAIN
AND RE-IMAGINE THEIR ABILITY
IN WAYS THEY NEVER
THOUGHT POSSIBLE.



Ranked #1 by *U.S. News & World Report* for the 23rd consecutive year, RIC is advancing ability for patients from around the world

The Rehabilitation Institute of Chicago (RIC) has the world's largest rehabilitation research enterprise with more than 350 studies underway and eight federal research designations in stroke, spinal cord, engineering research, outcomes and pediatric orthopedics that aim to advance treatments for patients and deliver better outcomes.

RIC integrates its scientific findings directly into the clinical environment, so that patients get access to the most innovative and state-of-the-art rehabilitation care available – anywhere.

To make a referral, or for more information, call RIC's Patient Global Services department at 1-312-238-1188, email international@ric.org or visit www.RIC.org

RIC's Global Patient Services (GPS) works with individuals from around the world providing assistance to patients and families from over 70 countries. Our team helps to plan, guide and support by providing services that include: transportation, housing, interpreters and other services as needed.





**Boston
Children's
Hospital**

Until every child is well™



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THINK BOSTON CHILDREN'S FIRST. Collaborating with Boston Children's puts the resources of a world-class hospital to work for you and your patients. Every year, our dedicated staff treats 170,000 children from over 100 countries, and we were recently awarded more #1 rankings than any other pediatric hospital in the United States by *U.S. News & World Report*. Call +1-617-355-5209 or visit bostonchildrens.org/internationalreferral