JOHNS HOPKINS MEDICINE INTERNATIONAL IMPACT REPORT FY15–FY16

# REALIZING THE MILLS OF THE

FOSTERING COLLABORATION • ELEVATING CARE • CHAMPIONING PATIENTS • DEVELOPING LEADERS • FUELING DISCOVERY • GIVING BACK





## **REALIZING OUR PEOPLE-CENTERED MISSION**

At Johns Hopkins Medicine International, we serve as the global ambassador of the Johns Hopkins Medicine mission: to improve the health of the community and the world by setting the standard of excellence in medical education, research and clinical care.

Working closely with our colleagues across Johns Hopkins Medicine, we have the remarkable opportunity to expand our mission's impact to people here and abroad. In these pages, you will read about how our transformative work is benefitting medical educators and their students, up-and-coming health care leaders, partners in research and discovery, our faculty, and most importantly, patients and families across the globe.



We made medical history with our affiliate Hospital Punta Pacífica, where a patient received the very first heart transplant in Panama. We helped train more than 50 staff members and physicians who not only made the first surgery a success, but who will be able to give this lifesaving care to future transplant patients.

We are offering unprecedented education to 13 nurses from Johns Hopkins Aramco Healthcare who are enrolled in a new Johns Hopkins University School of Nursing Doctorate of Nursing Practice program—the first of its kind in Saudi Arabia.

Patients in Asia may now receive cutting-edge, lifesaving drugs more safely and efficiently because our colleagues at Johns Hopkins Singapore created a real-time remote chemotherapy verification process to dispense medication.

Stories such as these showcase the work we are doing globally, but this report also demonstrates our deep commitment to those patients who travel to us for care. Regardless of whether they come from our local community or from thousands of miles away, we ensure that all of our patients are supported, heard and understood throughout their medical journey.

Our nationally recognized Language Access Services team members speak 30 languages to assist patients and families who have interpretation needs due to limited English proficiency, or who are deaf or hard of hearing. Additionally, we opened an international patient clinic that provides comprehensive health care and a medical home for international patients and their families before, during and after their visit to Johns Hopkins Medicine.

Here and abroad, we are fostering collaboration, elevating care, championing patients, developing leaders, fueling discovery and giving back. We focus on people to realize the mission of Johns Hopkins Medicine to improve the health of the community and the world.

Pamela D. Paulk, MSW, M.B.A.

President, Johns Hopkins Medicine International

Senior Vice President, International, Johns Hopkins Medicine

- The mission of Johns Hopkins Medicine is to improve the health of the community and the world by setting the standard of excellence in medical education, research and clinical care. Diverse and inclusive, Johns Hopkins Medicine educates medical students, scientists, health care professionals and the public; conducts biomedical research; and provides patient-centered medicine to prevent, diagnose and treat human illness.
- Johns Hopkins Medicine pushes the boundaries of discovery, transforms health care, advances medical education and creates hope for humanity. Together, we will deliver the promise of medicine.
- Johns Hopkins Medicine International acts as the global ambassador of the Johns Hopkins Medicine mission by providing patient-centered care for diverse populations and sustainable, innovative collaborations that raise the standard of health care around the world.

### 4

## FOSTERING COLLABORATION

We serve as connectors, convening the best minds and the most innovative ideas, extending Johns Hopkins Medicine expertise to affiliates around the globe to tackle the toughest problems in health care.

### 12

## **ELEVATING CARE**

There are myriad paths toward better clinical care, and we continue to forge new ones: Enabling firsts. Introducing fields of care. By going beyond knowledge-sharing, we help our affiliates tailor Johns Hopkins best practices for their settings.

### 24

## **CHAMPIONING PATIENTS**

Patients travel to Johns Hopkins Medicine for leading-edge health care. We match that expertise in our support. Our dedication propels us to be industry leaders, relentlessly focused on providing our patients with the best possible experience.

### **32**

## **DEVELOPING LEADERS**

Education is an investment that triggers chain reactions to raise the level of health care. When we train people to train others, the benefits are endless.

## 42

### **FUELING DISCOVERY**

We give researchers a chance to ask questions in diverse environments. By connecting our researchers with their affiliate counterparts, we bolster exploration and expedite innovation.

## 48

## **GIVING BACK**

Our work focuses us far away, across time zones and seas. But we still take the time to invest in ourselves and our immediate community to build connections, open opportunities and bring new ideas to the table.





COUNTRIES FEATURED
IN THIS SECTION
Bermuda
Kingdom of Saudi Arabia
South Africa
United Arab Emirates

We serve as connectors, convening the best minds and the most innovative ideas, extending Johns Hopkins Medicine expertise to affiliates around the globe to tackle the toughest problems. Our collaborations inspire us all.

As we help our affiliates develop sustainable solutions, bringing to bear our deep understanding of their missions, Johns Hopkins experts can gain insights and develop specialized treatments by applying knowledge in a distinctive environment.



## READYING AL RAHBA HOSPITAL FOR A LARGE-SCALE DISASTER

A

t 7 a.m., as the night and day shifts are about to change, a multivehicle crash brings in 60 people with a wide array of injuries to Al Rahba Hospital's emergency department. Overhead messages alert staff to activate the crisis plan. All communications start and end with the same four words: "This is a drill."

This large-scale disaster drill, designed by the Johns Hopkins Office of Critical Event Preparedness and Response (CEPAR) in December 2015, looked real: "Patients" received a specific medical scenario and experienced a moulage session to get makeup wounds resembling the condition they were assigned.

Physicians and nurses reacted to the different scenarios, putting critical areas to the test: mass casualty notification systems, triage assessments, inventory of resources and operating room capacity.

"Disaster drills are not meant to test individuals. They provide a no-fault learning environment to test and improve emergency procedures," says Christina Catlett, associate director of CEPAR.

Our experts connected CEPAR with Al Rahba Hospital, our affiliate in the United Arab Emirates, to plan the comprehensive drill. We served as observers during the drill and helped compile recommendations to transfer into action.

Delegates from Johns Hopkins Aramco Healthcare (JHAH), our joint venture in the Kingdom of Saudi Arabia, observed the exercise at Al Rahba Hospital. The experience inspired JHAH to join forces with us and CEPAR to organize a disaster drill for its hospital to help prepare for emergencies.



Disaster drills are not meant to test individuals. They provide a no-fault learning environment to test and improve emergency procedures."

CHRISTINA CATLETT, ASSOCIATE DIRECTOR OF THE JOHNS HOPKINS OFFICE OF CRITICAL EVENT PREPAREDNESS AND RESPONSE



Bermuda Life's head of population health and case manager visit Johns Hopkins to learn best practices. Boosting support for individuals with complex medical issues can reduce overall health system costs.

## Introducing a Population Health Approach to Lower Costs in Bermuda

The Argus Group turned to Johns Hopkins for support in targeting rising health care costs in Bermuda. Argus provides insurance to one out of every three Bermudians, positioning the organization to significantly influence the health of that nation.

Through an agreement signed in 2014, we connected Argus' subsidiary Bermuda Life Insurance Company Ltd. with Johns Hopkins HealthCare (JHHC) to customize our population health-based approach to reduce costs by supporting those individuals at highest risk.

After using JHHC's analytical tools, Argus now understands its clientele's most prevalent

issues—who is most likely to incur expensive, potentially avoidable health care services. These insights inform education campaigns and a case management program codeveloped with JHHC.

Bermuda Life's new head of population health and case manager trained for two weeks in Baltimore, establishing relationships with JHHC counterparts. Bermuda Life helped customize condition-specific interventions already in use at Johns Hopkins. These became fundamental elements of its case management program, which began enrolling members in 2016.



Being part of a multidisciplinary team here is an opportunity to provide my patients with the best standards of care."

ROBA DALLY, JOHNS HOPKINS ARAMCO HEALTHCARE

## **Sharing Safety Strategies** with Saudi Cohort

We worked with Johns Hopkins Aramco Healthcare, our health care joint venture with Saudi Aramco in the Kingdom of Saudi Arabia, and the Armstrong Institute for Patient Safety and Quality to support making patient safety a priority. Nearly 35 JHAH clinicians and administrators participated in the first two cohorts of the Armstrong Institute's Fellowship in Patient Safety and Quality Leadership, an intensive, yearlong program.

The selected fellows—including hospitalists, pharmacists, surgeons and quality improvement specialists—pair with Johns Hopkins mentors to tackle preventable harm by changing procedures, equipment, even the culture within medical units at JHAH.

The safety interventions and strategies they learn—or develop themselves—influence the quality of care delivered to thousands of patients.



JHAH safety delegates tour Johns Hopkins' state-of-the-art biocontainment unit.

## **FAST FACTS:**

- Nearly 100 JHAH staff members attended weeklong patient safety certificate programs presented by the Armstrong Institute.
- **369** JHAH staff members, local health care leaders and policymakers attended JHAH's **first** international patient safety conference.
- **256** attended a second conference in February 2016 focused on high-reliability organizations.



Health care leaders gather annually at the Johns **Hopkins Medicine** International **Partners Forum** to share best practices.

## **Inspiring Nursing Collaboration in Latin America**

For each of the last 10 years, we convened leaders from across Johns Hopkins and our affiliates at the Johns Hopkins Medicine International (JHI) Partners Forum to create a space for collaborative problem-solving and to forge ongoing relationships.

The chief nursing officers from our five Latin American hospital affiliates had such fruitful discussions at Partners Forum in 2015 that they decided to continue their conversation on a regular basis. JHI coordinated quarterly videoconference sessions where the nurse leaders focused on safety issues, including a universal quality measure: how to reduce and avoid falls.

This passion for collective problem-solving led to our first-ever Americas Regional Meeting in June 2016—a small, region-specific Partners Forum bringing together executive leaders from our affiliates in the Americas. The chief nursing officers reported outcomes of their fall prevention efforts, exchanging insights on topics ranging from how to track data to the best socks for reducing slips. The next round of videoconferences will focus on nurse leadership development.

# of international patients who received home care services in FY15-16: 2,354

## **Streamlining Care for International Patients**

We have long partnered with Johns Hopkins Home Care Group to improve care for international patients. The group collaborated with Johns Hopkins Hospital case management representatives to map a discharge planning model for this distinct population. More than 100 case managers and social workers have since been educated on the new model. The initiative's success fuels similar efforts with Johns Hopkins Bayview Medical Center.





**Arab Health**—the largest health care conference in the Middle East—takes a year to plan and attracts more than 100,000 attendees and 4,000-plus exhibitors, including our top competitors. We have participated in the conference for nearly 15 years to brand and position Johns Hopkins Medicine as a top-of-mind health care destination for patients from the region.



## Fostering Collaboration: A Look Ahead

We will work with Jhpiego, a Johns Hopkins University affiliate, in building the competency of the pediatric nursing staff at Nelson Mandela Children's Hospital so it can provide specialized services consistent with international care standards. This new hospital in Johannesburg, South Africa, is only the third specialist pediatric hospital on the continent.

This project will bring together Jhpiego, Johns Hopkins All Children's Hospital, the Johns Hopkins Children's Center and the Institute for Johns Hopkins Nursing.





## **COUNTRIES FEATURED** IN THIS SECTION

Kingdom of Saudi Arabia Lebanon Mexico Panama Peru Singapore United Arab Emirates

Just as there are infinite routes between Baltimore and Bangalore, there are myriad paths toward better clinical care. We continue to forge new ones. Enabling firsts, like a nation's first-ever heart transplant. Introducing levels of care, even fields of care.

## **Establishing new definitions for**

quality. Going beyond knowledge-sharing, we help our global affiliates tailor Johns Hopkins best practices for their settings. Our approach may be customized, but our goal stays the same: to improve access to high-quality health care around the world in sustainable ways.





## ADVANCING **ROBOTIC SURGERY** IN THE KINGDOM

rologists at Johns Hopkins Aramco Healthcare (JHAH) performed the very first robotic surgery there—and in the Kingdom of Saudi Arabia—using the technologically advanced da Vinci Xi Surgical System. JHAH is a joint venture between Saudi Aramco, a world leader in energy, and Johns Hopkins Medicine.

A leading-edge surgical tool, the robot translates the motion of a surgeon's hand into the precise movements of tiny instruments inside a patient's body. Johns Hopkins experts recommended the purchase and helped prepare the facility needed to house it.

We then paired JHAH urologist Tareq Al-Tartir with Mohamad Allaf, The Johns Hopkins Hospital's director of minimally invasive and robotic urologic surgery, to devise and implement a plan for building a comprehensive robotic surgery program at JHAH.

Together, Al-Tartir and Allaf considered what additional equipment and resources were needed and what processes the staff there would follow, and they established and trained a multidisciplinary team to conduct these surgeries. Al-Tartir and the JHAH team spent

two weeks at The Johns Hopkins Hospital, observing 16 robotic surgery cases and completing two surgical labs in the Minimally Invasive Surgical Training and Innovation Center.

After the inaugural surgeries at JHAH, Al-Tartir said: "The robot allowed me to view my work closer than I could have with just my eyes and to conduct precise tissue handling. The patient got to keep the kidney and go home two days after the surgery."

Not only can patients now receive minimally invasive urologic treatment close to home, but this program is also serving as a road map for JHAH to develop robotic programs in general surgery and gynecology, which will lead to shorter hospital stays and less pain for patients.

## **FAST FACTS:**

- Urologists performed the very first robotic surgery at JHAH—and in the Kingdom of Saudi Arabia—using the technologically advanced da Vinci Xi Surgical System.
- Johns Hopkins Medicine leveraged its supply chain to help JHAH purchase the surgical system robot.
- The JHAH robotic surgery team **observed 16 robotic urologic surgeries** at The Johns Hopkins Hospital.





## ENABLING THE FIRST HEART TRANSPLANT IN PANAMA

A

patient waits anxiously, in dire need of a new heart. Her local hospital stands ready. Then, the moment comes—a donor heart becomes available—and just like that, medical history is made in Panama.

On March 11, 2016, a multidisciplinary team at our affiliate Hospital Punta Pacífica (HPP) performed the first heart transplant in Panama, just two years after the Panamanian Ministry of Health designated the hospital as the only one in the country certified to perform these complex surgeries.

Johns Hopkins Medicine International (JHI) worked closely with HPP to design the transplant initiative and identify the training needed to cover the complete spectrum of care for cardiac transplant patients. Nurses and educators from the Johns Hopkins heart transplant team delivered two distance-education sessions to more than 50 HPP staff members and physicians.

At the time of publication, the patient was stable and accepting her lifegiving organ. The outcome of this historic surgery will give hope to many in the region for years to come.

### **FAST FACTS:**

- From 2014 to 2016,
   JHI worked with
   HPP on various
   aspects of program
   design and staff
   education and
   training.
- 50 HPP physicians, nurses and staff attended distanceeducation sessions in preparation for the heart transplant.
- After the education sessions, clinical knowledge test scores increased an average of 23 percent.

Out of 196 trials, the internet-enabled camera accurately scanned drug bar codes 95.4 percent of the time on the first try and 100 percent on the second.

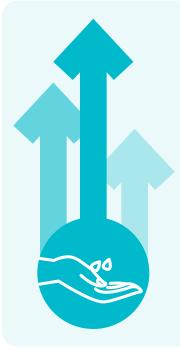
## **Innovating Chemotherapy Delivery**

When cancer is looming, there's no time to wait for the most cutting-edge, targeted drugs. Yet the high-touch, human-driven process for preparing and checking the safety of chemotherapy bags can often cause significant delays.

A team at Johns Hopkins Singapore (JHS), our 30-bed oncology joint venture in the Far East, was convinced there was a better way. It linked up with local technical experts at Temasek Polytechnic to explore videoconferencing as an option to save precious time in verifying chemotherapy cocktails.

As JHS staff members created a workflow and thoughtfully redesigned drug labels to include scannable bar codes, Temasek worked out the technical requirements. Out of 196 trials, the internet-enabled camera accurately scanned drug bar codes 95.4 percent of the time on the first try and 100 percent on the second.

These results justify investing in a comprehensive and secure video verification system to make ordering and preparing chemotherapy more efficient than ever before.



## TARGETING HAND HYGIENE

24 PERCENT: The rise in hand hygiene compliance across 12 units at seven affiliate hospitals.

The increase resulted from a yearlong initiative we led to improve quality across our global network. Hand hygiene, when performed at the right moments surrounding patient care, greatly reduces health care-associated infections and germ transmission. Participants jointly solved problems, such as identifying an alternative to hand sanitizer wall units and how best to incorporate hand hygiene training into staff orientation. Some affiliates have now expanded their efforts to other units, and one launched across the entire facility.

## **Imparting Medical Mastery** to Global Colleagues

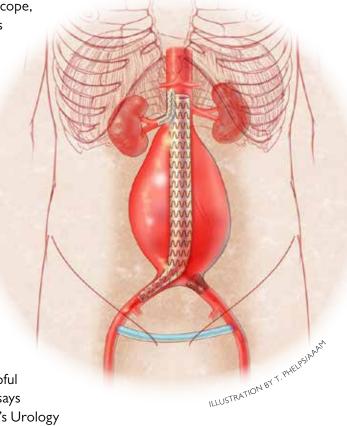
Standing in the operating room elbow to elbow with a Johns Hopkins colleague, observing each incision or adjustment of the laparoscope, can do more to expand surgical skills than any lecture.

Physicians at our global affiliates often observe our faculty members to broaden their knowledge and enhance clinical programs in their home countries. For example, Johns Hopkins urologist Arthur Burnett regularly works with the medical team at our affiliate Tawam Hospital in the United Arab Emirates to perform complicated cases, such as penile prostheses.

"Dr. Burnett provides great insight among our physicians in treating patients and has proven helpful in the delivery of health care here," says Muwafak Al-Salman, chair of Tawam's Urology Department.

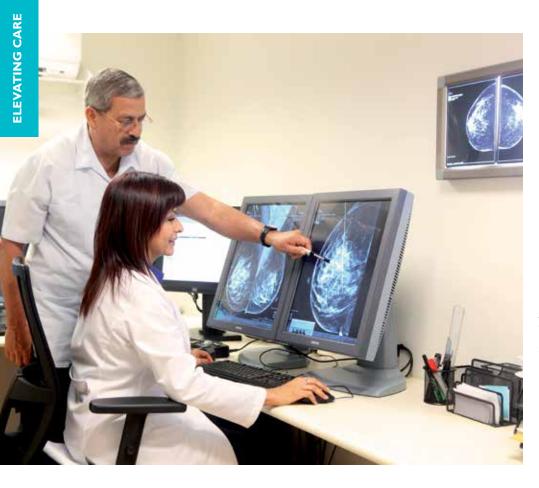
Through our joint venture Johns Hopkins Aramco Healthcare (JHAH) in the Kingdom of Saudi Arabia, Heitham Hassoun, our medical director for global services, and James Black, The Johns Hopkins Hospital's chief of vascular surgery and endovascular therapy, have performed several complex procedures including the first endovascular aortic aneurysm repair surgery in Saudi Aramco's health care history—and are collaborating closely with their Saudi colleagues to launch JHAH's endovascular surgery program.

True to our medical education mission, we'll continue this at-the-elbow advising globally to help our affiliates elevate health care delivery locally so their patients can receive high-quality care closer to home and family.



## **FAST FACTS:**

- Johns Hopkins physicians performed 29 surgical cases at JHAH in close collaboration with counterparts.
- Johns Hopkins and JHAH physicians held 36 clinical case conferences to partner on individual patient plans.



Employees at Aliada Cancer Center focus on raising the standard of oncologic care.

## **Defining a Standard for Cancer Care in Peru**

Johns Hopkins Medicine International affiliates share key performance indicator (KPI) data to illustrate their quality of care. Now we also offer our cancer-focused affiliates, like Aliada Cancer Center in Peru, the opportunity to report on factors that are most important to their patients.

As part of our agreement with Pacífico Salud, a Peruvian health care consortium, we guided its affiliate Aliada in establishing an infrastructure for reporting our standard KPIs. Our counterparts there asked about quality measures specific to cancer care. With input from clinicians at the Sidney Kimmel Comprehensive Cancer Center, our Johns Hopkins infection control experts crafted an oncology-specific KPI. By measuring port-catheter central line-associated bloodstream infections, Aliada can now monitor how well it is protecting patients with compromised immunity.

We will share this and additional oncology-specific KPIs with other cancer centers in our affiliate network.

## **Transforming Health Care** in Mexico

In May 2015, Johns Hopkins Medicine International and Tecnológico de Monterrey School of Medicine saw the need to convene leaders to solve some of the biggest challenges in the Mexican health care system. The International Health Care Leadership Forum gathered 100 experts from the public and private sectors, fostering leadership and envisioning the next level of care on a national scale.

The event provided a platform for sharing global best practices in medicine and public health. It prompted a second forum to continue the conversation in May 2016, with plans to continue annually. In its second year, attendee participation doubled, and media coverage surrounding the event grew by 160 percent.



Karen Haller, vice president of nursing and clinical affairs for Johns Hopkins Medicine International, participates in a press conference during the International Health Care Leadership Forum with Jorge E. Valdez García (left), dean of the Tecnológico de Monterrey School of Medicine, and Guillermo Torre Amione, president of TECSalud, an academic medical center.

## **Providing Better Ways to Share Bad News with Patients** in the United Arab Emirates

Delivering bad news to patients and their families is a skill that, like reading an EKG, requires training. Thanks to experts from the Johns Hopkins Simulation Center's Standardized Patient Program, Tawam Hospital, our affiliate in the United Arab Emirates, now has the foundation from which it can develop formal guidelines related to breaking bad news and the tools to build a robust training program that supports clinician skill building.

This stems from a simple request from Tawam's chief medical officer, who sought a way to be even more responsive to patient feedback: Could Johns Hopkins develop an online training course for her staff members to learn how best to handle these difficult patient interactions? Johns Hopkins Sim Center experts recommended a customized on-site training instead.

The first day of the three-day workshop introduced 50 physicians and nurses to a widely used framework for delivering bad news to patients. It encourages users to consider setting, language and physical actions, such as eye contact. After group discussions, videos and demos, it was time for participants to model what they had learned. The Johns Hopkins team trained 12 actors from a local medical college for simulated and videotaped patient encounters with the clinicians. Participants reviewed the recordings, self-assessments and feedback from the simulated patients in debriefing sessions.

These exercises and tools are building blocks Tawam can use to build an ongoing program aimed at improving patients' experiences, even during difficult and critical conversations.

## **Developing Primary Care in India**

Providing accessible high-quality care outside of the hospital setting is an emerging concept in India. HCL Healthcare, our affiliate in India, is now advancing this kind of care with its first five ambulatory care clinics, a corps of dedicated practitioners and a collaboration with Johns Hopkins that draws on our faculty leaders and experts from Johns Hopkins Community Physicians.

To ensure HCL's patients receive consistent high-quality care across the entire network, HCL clinicians are standardizing their clinical practice and operations. They identified 10 highpriority disease areas—including asthma, chronic diarrhea, and anxiety and depression—and a physician leader for each. The physicians develop clinical pathways specific to the condition, collaborate with a Johns Hopkins mentor to

refine their work and then train other HCL physicians on the new standard.

Physicians and administrators replicate this process, pairing with Johns Hopkins experts to develop quality and safety initiatives and a care management model.

HCL understands that professional development contributes to excellent patient care. A bimonthly HCL-Hopkins Day further solidifies the clinical collaboration across the teams. HCL providers participate in a two-part live stream that pairs an HCL case presentation with a recording of a relevant Grand Rounds by Johns Hopkins physicians. But investment in professional development doesn't stop there. The results of a comprehensive survey about training needs will shape future endeavors.



HCL Healthcare, our affiliate in India, is standardizing its clinical practice and operations to ensure patients receive high-quality treatment, regardless of where they access the network of care.

## **Convening an Annual Spine Summit in Lebanon**

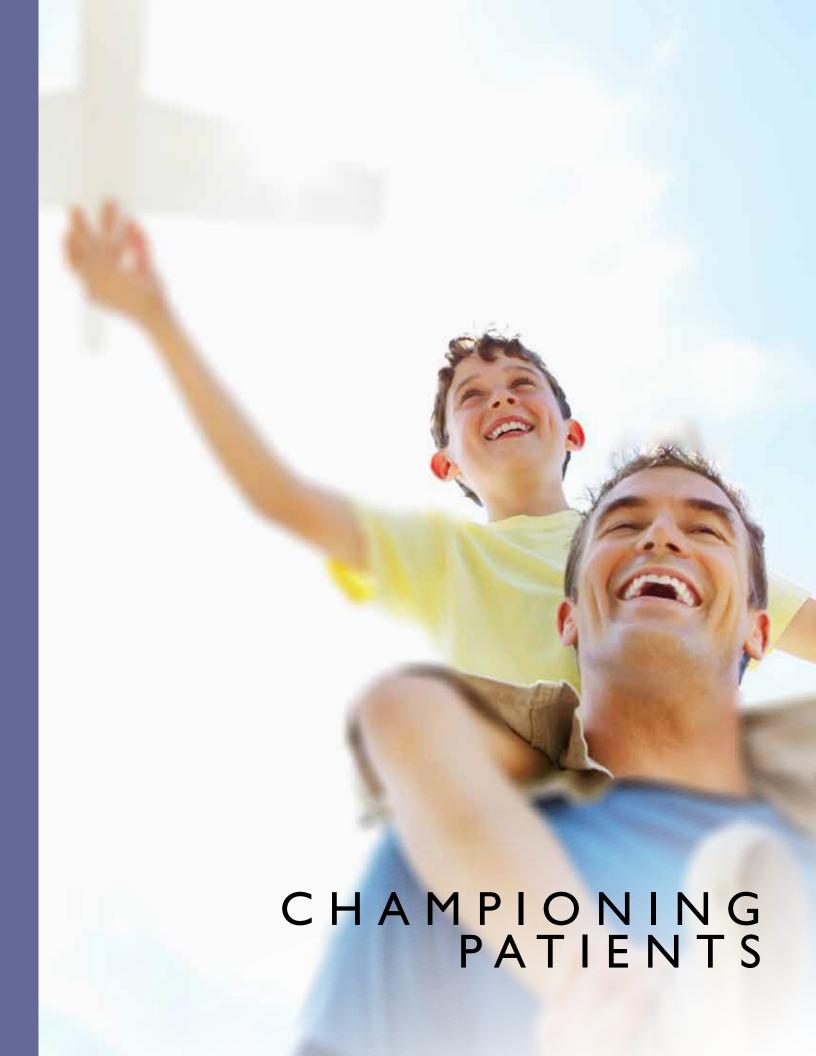
For years, Johns Hopkins Medicine International streamed online orthopaedic lectures to share the latest knowledge with colleagues at our affiliate Clemenceau Medical Center in Beirut, Lebanon. In 2015, the two organizations raised the bar and launched an annual Spine Summit that has since attracted some 250 physicians, fellows and residents in the areas of orthopaedics and neurosurgery. Fast-paced live lectures, followed by interactive group discussions, allow attendees to keep up with the latest concepts, literature and complex cases in the field. Plus, a surgical application activity provides opportunities to practice measuring spine and pelvic parameters and to discuss preoperative planning for certain spine conditions.



Clemenceau Medical Center, Lebanon



We launched an online portal to begin collecting monthly key performance indicator data from our affiliates. But we're already evolving it into a robust patient safety resource. Think part bulletin board (a dashboard for monitoring progress), part library (resources relevant to established patient safety goals and tailored to a unique setting) and part water cooler (a virtual space for discussion and joint problem-solving). The portal will ease collaboration with us and potentially between affiliates.

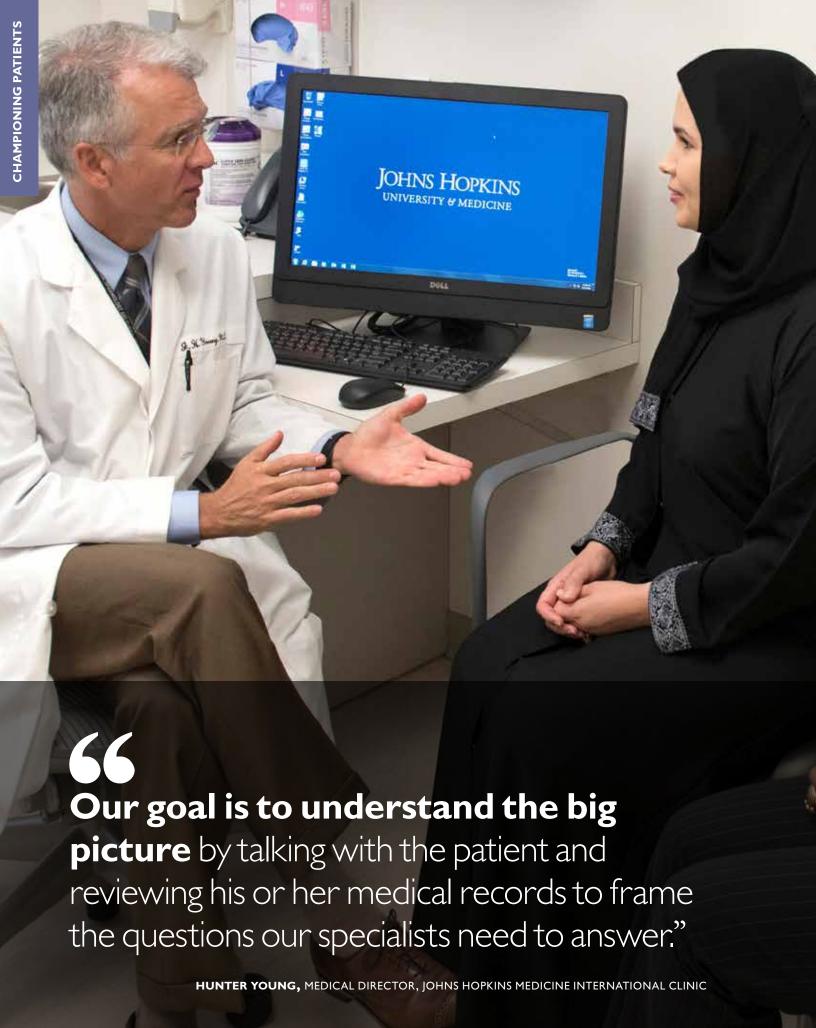




COUNTRIES FEATURED
IN THIS SECTION
Bermuda
China
United States of America

Patients travel to Johns
Hopkins Medicine from all over
the world for leading-edge
health care. We match that
expertise in our support for
them by providing patients
with a medical home away
from home. We establish
ourselves as thoughtful, caring
and knowledgeable from the
moment we answer the phone.

And we continue to share medical advances after they've returned home. Our dedication propels us to be industry leaders, relentlessly focused on providing our patients with the best possible experience.





## CREATING A MEDICAL HOME FOR INTERNATIONAL PATIENTS

e pride ourselves on caring for our international patients before, during and after their visit to Johns Hopkins Medicine. In 2015, we opened a clinic at Green Spring Station that helps us fulfill that promise, enhancing the experience for patients and the specialists who treat them.

A patient that Johns Hopkins has identified as needing an additional layer of support would begin his or her visit with a comprehensive evaluation at the international clinic. Our providers review medical records and gather information from the patient, then map out a care plan, forecasting the appointments the patient will need. The clinic becomes the patient's medical home, where he or she returns for checkups, monitoring and advice throughout the stay. When the patient is ready to return overseas, clinic staff members summarize the care he or she received and next steps.

Behind the scenes, our providers confer with the patient's specialists, keeping everyone on the same page and anticipating issues that can delay or disrupt care. For example, one specialist recommends ibuprofen for pain management, but another disallows ibuprofen in anticipation of surgery. How does the patient resolve these conflicting directions—and the pain? Our clinic experts guide patients on how to alleviate

symptoms without jeopardizing their surgical appointments.

The clinic's medical director, Hunter Young, likens his team's role to that of a quarterback on an American football team.

"Our goal is to understand the big picture by talking with the patient and reviewing his or her medical records to frame the questions our specialists need to answer," he says. "Once we develop a plan of care, the team works to ensure that everything goes smoothly and efficiently. Beyond receiving the highest quality of care, we want our patients and their specialists to have the best possible experience."

The clinic had more than 500 visits in the first year. The Green Spring Station team expanded so we can broaden the focus beyond "complex" patients—those who require the expertise of multiple specialists—and better support more of our patients who choose to travel from around the world to Johns Hopkins Medicine.

## **Providing the Right Language for Safer Care**

At its core, our Language Access Services team assists patients and families who have interpretation needs due to limited English proficiency, or are deaf or hard of hearing. But these talented, qualified medical interpreters also lead the industry and earn Johns Hopkins Medicine major recognition through their critical role in patient- and family-centered care. Whether assisting a patient during a conversation with a provider or translating patient education materials, these professionals ensure that patients are heard and understand their role in improving their health.



Un interprète médical certifié en espagnol a été sélectionné par la Commission de certification des interprètes dans le secteur des soins de santé, en tant qu'expert en la matière pour le panel de l'analyse des activités du poste.

A certified Spanish medical interpreter was selected by the Certification Commission for Healthcare Interpreters as a subject matter expert for the Job Tasks Analysis panel.

## 嬴得了国际医学口译员协会2016年度最佳翻译机构奖

Won the International Medical Interpreters Association's Provider of the Year Award in 2016.

## myChart está ahora disponible en español.

MyChart is now available in Spanish.

Her sene düzenlenen Uluslararası Medikal Cevirmenler Dernegi Konferansı 2015 için Johns Hopkins hastanesine tur organize edildi

Hosted a tour of The Johns Hopkins Hospital for the International Medical Interpreters Association 2015 annual conference.

interpretation requests

1,633 translation requests

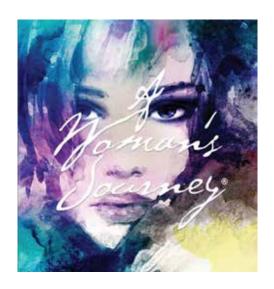
interpreters, 12 of which are nationally certified or recertified in 6 languages

Johns Hopkins clinicians evaluated to deliver care in another language; 23 qualified in 3 languages

top languages for interpretation: Spanish, Arabic, Korean, Mandarin and American Sign Language

## Bringing A Woman's Journey to Bermuda

A Woman's Journey events in Baltimore and Florida have showcased Johns Hopkins' best to consumers for decades. In 2015, we took this much-loved conference global with the first-ever A Woman's Journey in Bermuda. We reaffirmed our dedication to former patients by inviting them and their guests to hear the latest research advances and medical updates from Johns Hopkins experts in an intimate setting. An abundance of positive feedback brought us back in 2016, with a 45 percent increase in attendance over the inaugural event. Next, we're considering other international locations.





It was a privilege to attend my second A Woman's Journey in Bermuda and leave with valuable information that can be passed on to family and other women."

2016 ATTENDEE



## **Welcoming New Patients from Johns Hopkins Corporate Agreements**

When Walmart, Lowe's and other large employers began extending an exciting new benefit to their employees—full coverage of costs associated with knee and hip replacement procedures at Johns Hopkins Bayview Medical Center—it fell to our expert team at Johns Hopkins USA to ensure that these out-of-state patients have a seamless experience coming to Johns Hopkins. We anticipated 20 cases the first year. We received more than 430 inquiries and handled 279 cases across the first two years, with significant volume increases from the first to the second year.

Each conversation with our customer servicefocused medical concierges introduced someone new to Johns Hopkins' excellence. The hope is that those warm, knowledgeable voices will remain in consumers' minds as a beacon for their future complex health needs.

## **VOICES OF OUR PATIENTS**

"I would and do recommend Hopkins to everyone. I believe you are the finest hospital in the world."

FROM BERMUDA

"If I was asked to score on all counts, you would score a 10/10."

FROM LATIN AMERICA

"I arrived at Johns Hopkins with my head low. You held my hand and took me step by step. Thank you for your attention, care and dedication."

FROM LATIN AMERICA



## Increasing Responses to Patient Satisfaction Survey

We have, for years, received high marks on our international patient satisfaction survey. But any good statistician will challenge you to prove the significance of your findings. That's why we set out to boost our survey response rate—and achieved a 35 percent increase in the process. Today, we have greater confidence that our scores more accurately reflect what our patients experience.



412
patients
completed the
survey



35% increase in participation



84%
of respondents
were very
satisfied or
satisfied with
their experience

"Our medical concierge was unbelievable. Professional, efficient—she made us feel exceptional. Her efforts to arrange all things for us were amazing. It is people like her that make for a great experience."

FROM EUROPE

"During my visits to Johns
Hopkins, I was impressed by your
professionalism, efficiency, as well
as caring attitudes toward patients.
You really made me feel that I
was... in good hands."

FROM CHINA

"I would like to extend my thanks and appreciation for all the help you provided us during our mom's treatment at Johns Hopkins. Especially to our care coordinator. Her support and personality positively reflected on our mom's psychological state."

FROM MIDDLE EAST

"Our care coordinator was there for us whenever we needed him.

He is one of our family members, standing beside us during a critical time in our lives. I feel speechless, I don't know how to thank him."

FROM MIDDLE EAST

## **Taking Care of Family**

Since the launch of our joint venture Johns Hopkins Aramco Healthcare in 2014, we've welcomed 248 patients from Saudi Aramco for treatment at Johns Hopkins. To make the experience as seamless and close to home as possible, we provide everything from interpretation to clinical oversight, travel advice, consolidated appointment scheduling and billing, just as we do for all our international patients. Patients can focus completely on their recovery and leave the logistics to us.



## **Championing Patients: A Look Ahead**

We're constantly exploring new ways to better support our patients. Our plans include enhancements to our international patient and family lounge, an orientation video to better prepare patients for what to expect and around-the-clock on-call coverage to make ourselves available whenever patients need us.





COUNTRIES FEATURED IN THIS SECTION

Chile China Colombia Kingdom of Saudi Arabia Panama Singapore

**Education** is an investment that triggers chain reactions to raise the level of health care. A nurse leadership initiative lifts nursing practice to the top of its profession, increasing efficiency, freeing resources that could translate into expanded services or improved access for patients.

A leadership competency course gives executives a more comprehensive view for decision-making. Professional development for physicians arms them with greater options for understanding disease and treating patients. When we train people to train others, the benefits are endless.





# ADVANCING THE NURSING PROFESSION IN SAUDI ARABIA

ohns Hopkins has given us a good introduction into more modern nursing models, new ways of developing and working," says Petronella Bezuidenhout, a nursing supervisor in cancer care at Johns Hopkins Aramco Healthcare (JHAH).

From the earliest days of our health care joint venture with Saudi Aramco, Johns Hopkins Medicine has brought its experts to share our academic standards and clinical best practices with nurses whose dedication and expanded knowledge will not only build nursing capacity at JHAH, but also advance the profession throughout Saudi Arabia.

We connected JHAH with the Institute for Johns Hopkins Nursing (IJHN) to establish an internship program for newly hired nurses and a mentoring program for more experienced nurses. The programs included in-country trainings and customized webinars to help JHAH deliver patient-centered care that is anchored in education.

Along with nurse consultants from the nursing institute, we also conducted workshops for charge nurses, a new role at JHAH.

"We had never had charge nurses before, and now you can see the difference in the unit. The front-line staff is much more motivated," says Thabile Gabuza, a nursing supervisor in JHAH's pediatric intensive care unit.

The courses were delivered to 60 nurse educators and supervisors on site at JHAH in a "train the trainer" model, and nursing professionals there are now educating their own staffs.

IJHN is also building nonclinical competencies at JHAH through its Nursing Leadership Academy in Baltimore. So far, 17 students have taken courses ranging from conflict management to financial acuity. We are working with JHAH, the nursing institute and the Saudi Ministry of Health to bring the Nursing Leadership Academy to the rest of the Kingdom.

In addition, with our support, JHAH and the Johns Hopkins University School of Nursing implemented a Doctorate of Nursing Practice program (DNP), the first of its kind in Saudi Arabia.

"This program is my dream," says Leena Al-Mansour, a DNP student. "I'm looking to advance my career. I want to improve my leadership skills and my clinical practice. This is a golden opportunity."

### **Boosting Research Infrastructure**

Our collaboration with Sun Yat-sen University (SYSU) aims to increase SYSU's clinical research infrastructure. Johns Hopkins University (JHU) clinical investigators and research staff have helped their Chinese counterparts establish a research ecosystem. Engagement is extensive, including participation of:

SYSU participants in clinical research study coordinator courses

60+ SYSU participants in clinical research courses

> 40+ IHU faculty and staff from the Schools of Medicine, Public Health and Nursing; Berman Institute of Bioethics; and Johns Hopkins Medicine International

**28** SYSU participants in a 3-day bioinformatics course

consisting of 3 executives and leaders, 2 ethics staff, and 6 clinical research investigators and coordinators who attended 1-3 months of training here at Johns Hopkins

10 one-year clinical research and methodology fellows at Johns Hopkins



### **GUIDING LEADERSHIP DEVELOPMENT** OF CHINESE EXECUTIVES

335: The approximate number of participants—government officials, hospital executives, and clinical and nursing leaders—in our ongoing Chinese Health Care Leadership Executive Education Program.

We bring these executives to Baltimore to learn from Johns Hopkins' best, while deepening our relationships with critical thought leaders in China. The customized agenda varies by group interest and visit length, including topics such as hospital administration, safety and quality, IT, nursing, pharmacy, medical education and research infrastructure.



Visiting executives from China take a break during the Chinese Health Care Leadership Executive Education Program at Johns Hopkins.

# **Building Chilean Nurses' Leadership Skills**

Advancing nursing practice is a key way we develop health care leaders. As one example, 30 nurse leaders from our affiliate Clínica Las Condes in Chile completed a nearly yearlong professional development initiative, building their skills in areas like communication, performance management and quality measurement. Johns Hopkins experts delivered lectures and workshops through videoconference and one inperson session. These nurse leaders are now applying what they learned to critical issues at their hospital, including improving discharge planning and increasing compliance with pressure ulcer-reducing protocols.

### Broadening Knowledge at First Panamanian Global Men's Health Summit

A new initiative in Panama gathered medical practitioners and students from around the world to advance the study of men's health. Urology was one of the main topics of the first Global Men's Health Summit and Update Course, sponsored in part by our affiliate Hospital Punta Pacífica, in December 2015. We identified Johns Hopkins faculty members Arthur Burnett and Brian Matlaga to lecture on urology topics focused on erectile dysfunction and stone disease.

In a bold move, Burnett performed penile implant surgery at Hospital Punta Pacífica, which was broadcast live at the summit. "Live broadcasts are an innovative and efficient way of sharing knowledge," says Burnett, "because a broader audience is able to watch and learn in a novel learning environment."

66

Sharing knowledge is one of the objectives of the joint venture between Saudi Aramco and Johns Hopkins Medicine.

This is most visibly felt by staff and the public through the Distinguished **Faculty Visit** Program. Faculty interact on the ground, bringing their vast expertise as well as the Johns Hopkins brand. This has been a tremendous success."

**RAMZI BANDA** 

JOHNS HOPKINS ARAMCO HEALTHCARE

### **Engaging and Educating Communities** Worldwide

Collaborating with culturally diverse colleagues. Experiencing a parallel medical treatment facility in another country. Informing international counterparts about the state-of-the-art medicine we practice in the United States. These are reasons Jack Ingari, an orthopaedic surgeon specializing in hand surgery, chose to participate in one of the programs we established to educate and engage caregivers at our global affiliates, as well as the community members they serve.

Through the Distinguished Faculty Visit Program at Johns Hopkins Aramco Healthcare (JHAH), Ingari and 15 other distinguished Johns Hopkins faculty leaders so far have traveled to Saudi Arabia to give Grand Rounds to JHAH clinicians, review difficult cases, provide consultation to their physician peers and present lectures to Saudi Aramco community members.

As another example, we present experts from across Johns Hopkins Medicine as part of the Visiting Professors Program at the Fundación Santa Fe de Bogotá. While in Colombia, visiting experts explore areas for collaboration and present lectures and roundtable discussions on medical specialties, including nursing, urology, neurology, pathology, orthopaedics and patient safety.

### **FAST FACTS:**

- 15 distinguished Johns Hopkins faculty leaders traveled to Saudi Arabia.
- 2,050 faculty and staff attended the Grand Rounds presented by the faculty speakers.
- 1,035 Saudi Aramco community members attended public lectures by distinguished Johns Hopkins faculty members.



Leaders from Johns Hopkins and Nanjing **Drum Tower** Hospital come together during our visit to China.

### **Developing Clinical Education in China**

We led an assessment at Nanjing Drum Tower Hospital, with the goal of developing a transformative, competency-based education and clinical training model, as well as a team-based care delivery system in China. This opportunity was based on the exploration of a three-way collaboration with Taikang Life Insurance Company Ltd. This innovative public-private collaboration model would address what may be the greatest needs in China's health care infrastructure: human resource development and patient care models.

Throughout 10 visits across 16 months, Johns Hopkins experts evaluated how we might transform Drum Tower's clinical training programs, clinical operations, use of technology and more. During these assessments, we shared information about multidisciplinary care and the U.S. model for medical training and clinical professional development—and we gained a deeper understanding of the Chinese health care and medical education systems.

### **Training the Next Generation of Saudi Ophthalmologists**

King Khaled Eye Specialist Hospital played a major role in developing Saudi Arabia's first ophthalmology residency program in 1984. The largest eye hospital in Saudi Arabia, it even provided training for every Saudi ophthalmologist who graduated from the program.

But when we connected that hospital's leaders with the Johns Hopkins Wilmer Eye Institute, they saw a great opportunity to launch their own residency program and grow Saudi Arabia's next generation of leaders in ophthalmology.

The hospital is leveraging the experience and expertise of Wilmer faculty members to train an inaugural class of eight new ophthalmologists who, in turn, will lead its clinical, research and training programs in the future.

The goal is to groom medical innovators who can treat devastating eye diseases, such as those caused by diabetes—an important health risk among Saudis—and to develop new procedures and therapies for conditions that are not yet curable in the Kingdom or the region beyond.

### **FAST FACTS:**

- Wilmer Eye Institute faculty members have trained more than 100 ophthalmology department chairs in dozens of countries.
- The King Khaled Eye **Specialist Hospital** launched its residency program in October 2015 with an inaugural class of eight.



### **DEVELOPING NURSE LEADERS FROM EIGHT COUNTRIES IN BALTIMORE**

**287 nurses and nurse leaders from 10 affiliates in nine countries** participated in nurse education sessions we delivered with the Johns Hopkins University School of Nursing and the Institute for Johns Hopkins Nursing. Interactive workshops build skills, such as how to establish a budget or have difficult conversations with staff members.

Johns Hopkins Singapore (JHS) welcomed more than 100 medical students, residents, fellows, nursing students and other allied health professionals for education and training programs including:

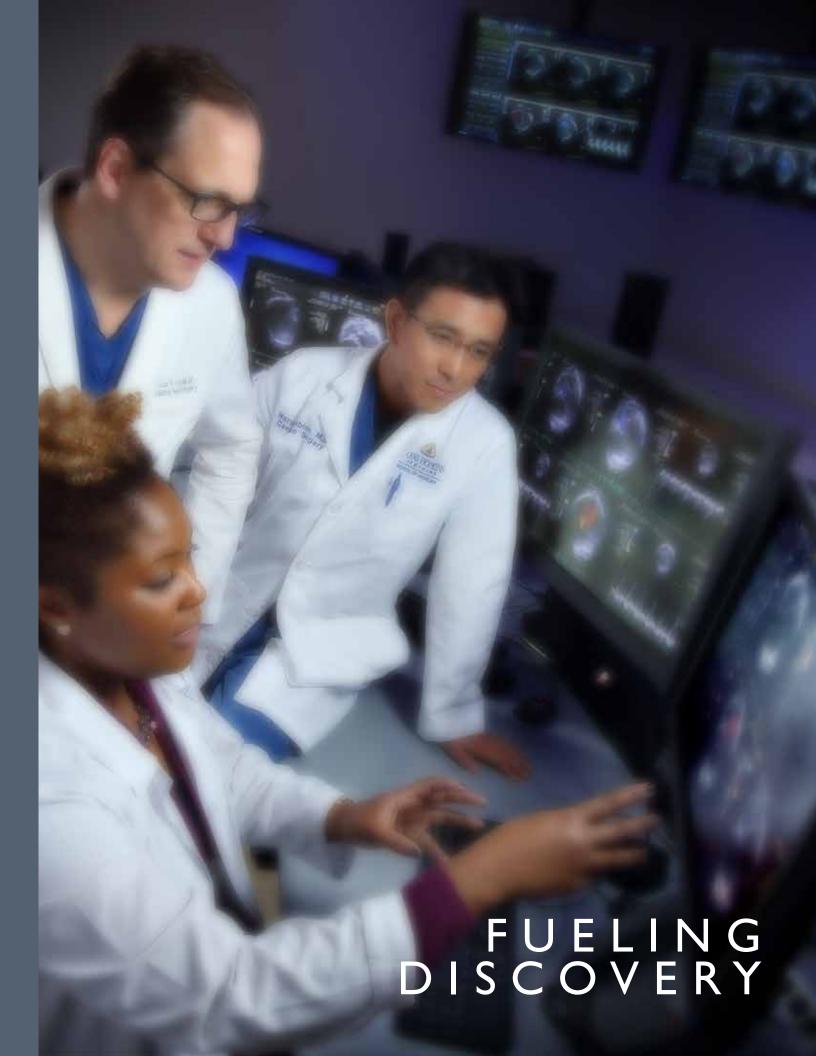
- 1st fellow to graduate from the National Healthcare Group medical oncology senior residency program; he will join JHS faculty this year
- 53 third-year medical students from Lee Kong Chian School of Medicine
- 2 National Healthcare Group medical oncology senior residents

- 8 National Healthcare Group internal medicine residents
- 3 Tan Tock Seng Hospital palliative care residents
- 13 international medical students from Bahrain, Mexico, Taiwan and the **United States**
- 4 staff registrar scheme medical oncology trainees

# **Developing Leaders: A Look Ahead**

Johns Hopkins Medicine signed an agreement with Southern University of Science and Technology (SUSTech) in China focused on supporting that institution's goal of establishing a new medical school. Drawing on our centuries-long experience in medical education and our revolutionary Genes to Society curriculum, we will support and advise SUSTech in vital areas, including curriculum and faculty development, admissions and educational administration policy, facilities and technology infrastructure, clinical clerkships and hospital affiliations.

In late 2016, nurse leaders at Fundación Santa Fe de Bogotá in Colombia will build on training they received from Johns Hopkins in 2015. Its chief nursing officer, Elsa Carvajal, expects to publishinternally and academically—the nursing practice model she developed with input from her Johns Hopkins counterparts. Several other Nursing Leadership Academy graduates will pair with Johns Hopkins speakers for a 12-videoconference series. Each pair will present on a topic, like nursing recognition or discharge planning, then lead the ensuing discussion to establish next steps.





**COUNTRIES FEATURED** Kingdom of Saudi Arabia Panama Singapore United Arab Emirates

**Every day across Johns** Hopkins, researchers strive to answer, "What happens when...?" We give them a chance to explore those questions in diverse environments.

For example, how does a Johns Hopkinsdeveloped tool targeting one of the most ubiquitous health care challenges work at hospitals in the United Arab Emirates and Brazil? By connecting our researchers with their affiliate counterparts, we bolster exploration and expedite innovation.





# **PROMOTING COLLABORATIVE** RESEARCH WITH **GLOBAL AFFILIATES**

ur first scholarly paper with our joint venture Johns Hopkins Aramco Healthcare (JHAH) in Saudi Arabia and a joint study with our affiliate in Brazil, Hospital Moinhos de Vento (HMV), reveal the rich potential of the collaborative research Johns Hopkins

conducts around the world.

JHAH clinical researchers Abdulrazack Amir and Salwa Sheikh and Johns Hopkins urologists Brian Matlaga and Justin Ziemba will present their paper, "Kidney Stone Composition in the Kingdom of Saudi Arabia," at the 74th World Congress of Endourology, the largest international meeting on minimally invasive urologic surgery.

In Brazil, a three-day event inspired clinicians at HMV and Johns Hopkins Medicine

(JHM) to partner on a research project. Matlaga and Ziemba, along with urology resident Wesley Ludwig, again engaged global colleagues in an important joint study, this time with Eduardo Carvalhal, chief of urology at HMV, and urologist Leticia Ruiz from Hospital Punta Pacífica (HPP), our affiliate in Panama. They presented their research at the American Urological Association's annual meeting in May 2016 and will be turning their study into a manuscript for publication.

### **FAST FACTS:**

- Two new joint research projects among HMV, HPP and JHM:
  - 1. Urology: "A Mobile Point-of-Care Application for Ureteral Stent Tracking"
  - 2. Emergency Department: "International Development and Implementation of a Novel Electronic Outcomes-Based Emergency Department Triage Tool"
- First joint JHM/ JHAH research abstract: "Kidney Stone Composition in the Kingdom of Saudi Arabia"

### FUNDING RESEARCH AT JOHNS HOPKINS SINGAPORE

\$1,800,000 IN RESEARCH FUNDING

RESEARCH STUDIES APPROVED (OR OCCURRING)

CLINICAL TRIALS FOCUSED ON CONDITIONS ENDEMIC TO THE REGION

## Testing an Emergency Triage Tool in Brazil and the United Arab Emirates

HopScore, an electronic tool developed at Johns Hopkins, helps doctors here better triage patients in the emergency room than the traditionally used Emergency Severity Index (ESI). Now, thanks to joint research across continents that we helped facilitate, scientists know that HopScore works in diverse settings—potentially at any hospital across the globe.

We connected School of Medicine researchers with two of our affiliates—Al Rahba Hospital in the United Arab Emirates and Hospital Moinhos de Vento in Brazil—so they could investigate customizing HopScore internationally. The hospitals provided data to develop site-specific algorithms, and the results are promising: HopScore outperformed ESI.

HopScore inventor Scott Levin says the study pushed the Johns Hopkins team to explore how the tool could be customized. For example, the researchers created a way to analyze patient interviews in Portuguese and extract patients' chief concerns.

Levin points out cultural differences in why HopScore matters. "In the U.S., it can support operational decisions. But in most other countries, emergent care is a new field, which means those emergency department clinicians might have less experience making triage decisions. HopScore bolsters their confidence, adding to the information they have available to make these decisions—especially since it can be specifically customized to that hospital's patient population."

In the next phase, AI Rahba Hospital and Hospital Moinhos de Vento will use both HopScore and ESI to safely evaluate how HopScore could inform clinical decision-making. Use of HopScore can potentially expand throughout Brazil and the United Arab Emirates.



Johns Hopkins Aramco Healthcare was awarded \$300,000 in internal funding and received approval to hire three staff members to grow its independent research program. Medical research was a priority from the start of the joint venture in Saudi Arabia.

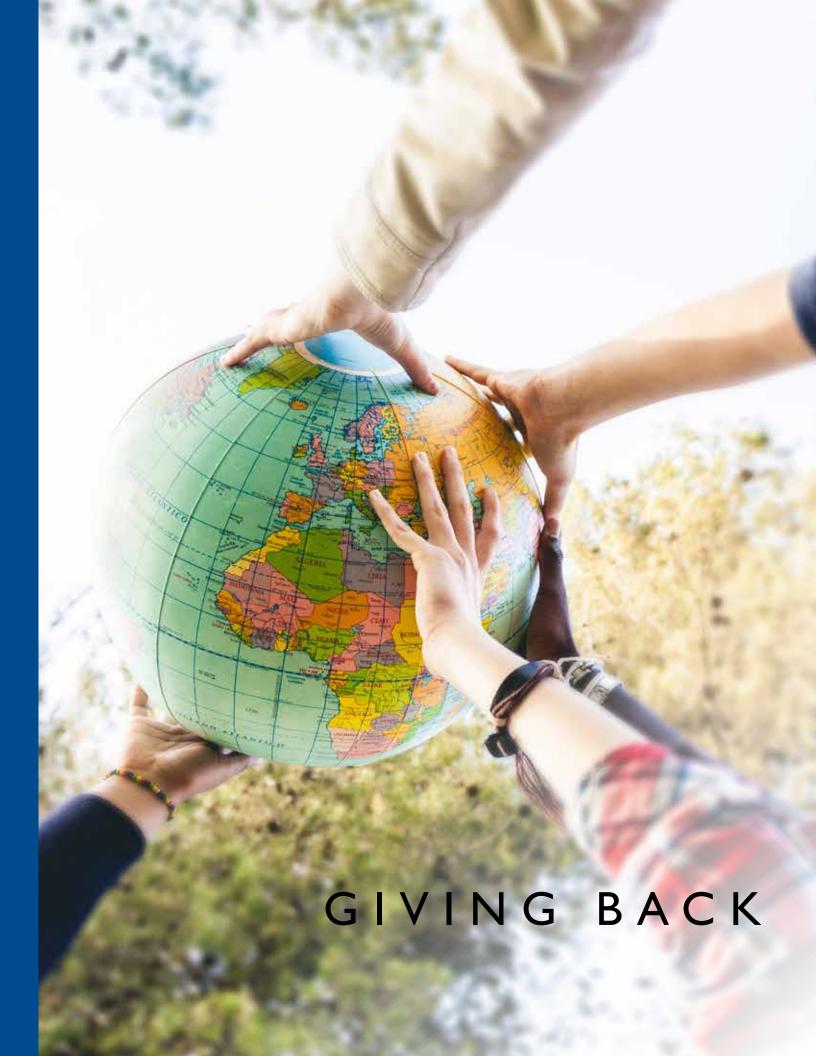


### Fueling Discovery: A Look Ahead

Before Johns Hopkins Aramco Healthcare (JHAH) launched, medical research was not a key focus of Saudi Aramco's health care division. When we entered into the joint venture, we made it a goal with Saudi Aramco to expand this budding program, transforming how medical research is viewed and performed at JHAH.

We convened Johns Hopkins experts to make recommendations that included connecting physicians from both health systems for joint investigations, establishing research-ready databases and developing a culture supportive of research within JHAH.

To realize these recommendations, JHAH received internal approval and \$700,000 in funding early in 2016 to initiate its own research department, and to position JHAH as a key partner with Johns Hopkins faculty in medical discovery in the Kingdom of Saudi Arabia.







Our work focuses us far away, across time zones and seas. But we still take the time to invest in our organization and our immediate community to build connections, open opportunities and bring new ideas to the table.





### JOHNS HOPKINS MEDICINE INTERNATIONAL EMPLOYEE ENGAGEMENT AND DIVERSITY COMMITTEE

Clockwise from top left corner: Patricia Skillin, co-chair; Lindsay Rothstein, leadership champion; Christine Shipley, leadership champion; Jennifer Dunkes, co-chair; Ilan Roth; Kristina Hobbs; Carlos Arismendi Ortiz, treasurer; Jason Miller; Irene Randall; Paulette Hendricks; Cymantha Governs, secretary; Carlos Tobar; Maya Barron; Mohammed Al-Taee

Not pictured: Abdelhafid El Amrani El Idrissi, Kim Norman, Rosa Ryan







# FOSTERING A CULTURE **OF ENGAGEMENT**

ohns Hopkins Medicine measures employee engagement every year using the Gallup Q12 survey. Engagement has a welldocumented, positive relationship with factors that contribute directly to our bottom line: productivity, dedication and efficiency. Our engaged employees go above and beyond to be excellent for their patients, customers and colleagues. Recognizing this value, we put a renewed effort toward engagement, and it paid off with a significant leap in engagement scores from fiscal year 2015 to 2016.

What's behind the rise? We invested heavily in tools that arm employees with the resources and information they need to succeed and that allow them to focus on what they do best:

- Amplifying our IT infrastructure to include systems that make us more effective and data-driven
- Launching an intranet—an easy-to-use, centralized source of information driven by employee input
- Establishing a corporate orientation program to connect new employees with the mission and raise their baseline knowledge so they can more quickly contribute
- Producing a weekly email digest of "need-to-know" news for employees
- Forming our Employee **Engagement and Diversity** Committee in June 2015 so engagement could be a grassroots effort

Our inaugural committee members rose to the challenge, establishing guiding pillars, goals and an infrastructure. They planned almost 10 organization-wide events, held two Gallup trainings and shared more than 15 cultural observance stories with JHI, strengthening the connections between employees.

The committee collects feedback on every effort and uses it to immediately shape new endeavors.

Next, the committee will launch a robust, Shark Tank-like program through which employees can propose, explore and even fully realize ideas that will support our key priorities—and keep us pushing boundaries, setting the standard of excellence and delivering the promise of medicine. ■



2015 recipients of the Paul S. Lietman Johns Hopkins Medicine International Scholarship and senior Johns Hopkins Medicine representatives visit us in fall 2015.

### Funding Medical Students from 10 Countries

Four years ago, we established a need-based scholarship for international students pursuing their medical degree at the Johns Hopkins University School of Medicine. Today, the Paul S. Lietman Johns Hopkins Medicine International Scholarship is named for one of our earliest faculty champions.

The 2015 slate of recipients hail from 10 countries across five continents. We invited them to our Fell's Point office in December 2015 to meet Johns Hopkins Medicine International leaders and members of the Lietman family. These future physician leaders may one day choose to collaborate with JHI as we extend the Johns Hopkins mission around the globe.

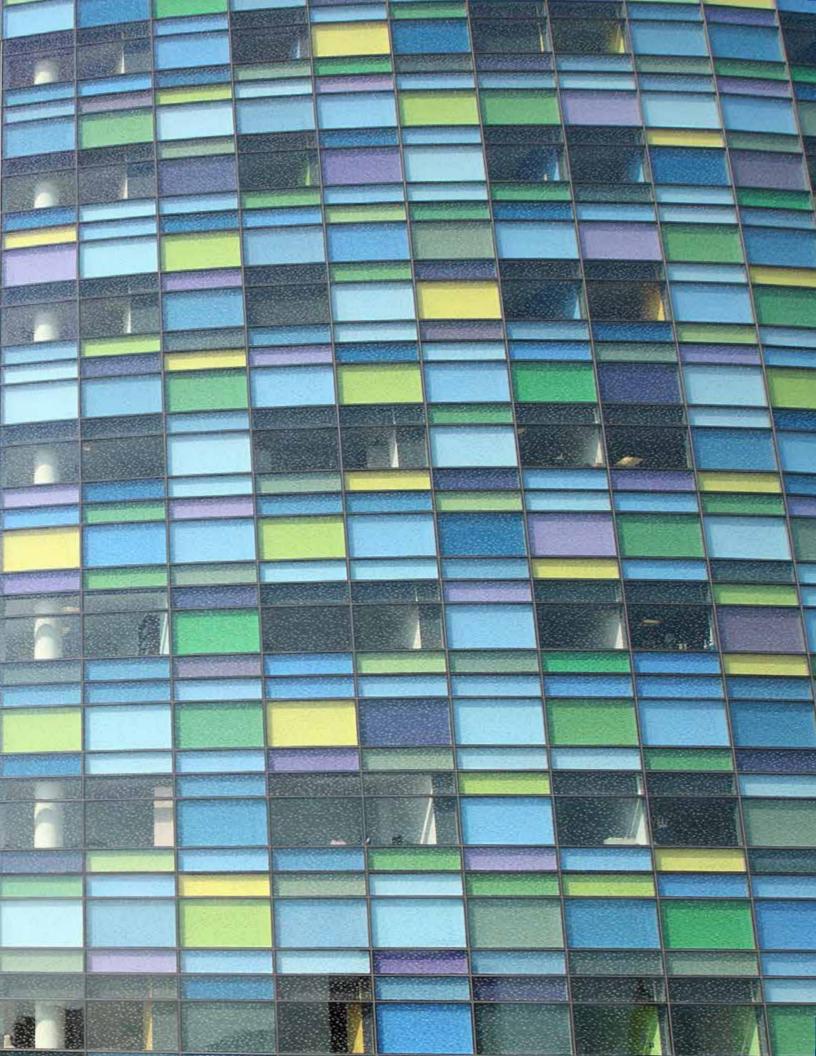
The family of early Johns **Hopkins Medicine International** faculty champion, the late Paul S. Lietman

### **Uniting Behind Our United Way Campaign**

Each year, we do our part to support the Johns Hopkins Medicine United Way campaign. In 2015, the institution held the first Dancing with the Hopkins Stars—a United Way fundraiser modeled after the reality show dance competition. Our president paired with a transplant surgeon in the winning Lindy Hop number, but we can't quite take credit for that. However, all of our executive leaders did inspire

a dramatic increase in participation. In the 2015 campaign, 35 percent of our employees contributed a one-time or recurring United Way donation—we more than tripled our participation rate.

Our contributions will help dozens of Baltimore City families, connecting them to healthy food options, shelter, medical care and much more.





Johns Hopkins Medicine International 1300 Thames St., Suite 200 Baltimore, MD 21231 hopkinsmedicine.org/international

To learn more or to explore opportunities to collaborate, contact us at international@jhmi.edu

To request an appointment for care, contact us at hopkinsmedicine.org/international/appointments