LEWIS KATZ SCHOOL OF MEDICINE AT TEMPLE UNIVERSITY | TEMPLE UNIVERSITY HEALTH SYSTEM

Temple Health Magazine

SUMMER 2017

Why CEO Larry Kaiser Calls Temple Health's *Mission Unmatched*

A PHILLY ICON TURNS 125: HAPPY BIRTHDAY, TEMPLE UNIVERSITY HOSPITAL

HABIT OF THE HEART: A STORY BY PULITZER PRIZE-WINNING AUTHOR MICHAEL VITEZ

TEMPLE HEALTH


Temple
University
Hospital

Pioneers, Then and Now

On February 1, 2017, an iconic institution in the City of Brotherly Love turned 125: Temple University Hospital. It was founded in 1892 by Russell Conwell, Temple University's creator, the same year Ellis Island began welcoming immigrants to the United States.

It's almost hard to believe that one of Philadelphia's busiest hubs of academic medicine began with just one physician and one nurse. But that two-person staff had the backing of hard-scrabble North Philadelphians — volunteers who converted a house into a 20-bed hospital — and kept on working. Thanks to their sweat equity, the hospital operated five years without billing a single patient. And grew, fast. By 1902, Samaritan Hospital (as it was then called) had more than 100 beds — and was running a school of nursing, a school of pharmacy, and the clinical arm of Temple College's new medical school (today's Lewis Katz School of Medicine).

"We are striving not only to do our routine work of relieving those in the community, but endeavoring to aid the progress of medicine by the development of safer, better, and more scientific methods of practice," said W. Wayne Babcock, MD, Samaritan's chief surgeon, in 1908.

Important missions and motivations don't change. They're timeless and timely. Here's to the pioneers of 125 years ago. And to the pioneers of the modern day.

Larry R. Kaiser, MD, FACS

Senior Executive Vice President for Health Affairs, Temple University
The Lewis Katz Dean at the School of Medicine
Professor of Surgery, Lewis Katz School of Medicine
President & CEO, Temple University Health System

125: SEAN MCCABE; KAISER: COURTESY KAISER

Temple Health Magazine

EDITOR
Giselle Zayon
giselle.zayon@tuhs.temple.edu

DESIGN & ART DIRECTION
B&G Design Studios

WRITERS & CONTRIBUTORS
JoAnne DeSanto-Bonewicz
Christopher Guadagnino
Jennifer Lee
Meredith Mann
Kara Rogers
Jeremy Walter

BUSINESS MANAGER
Younndia Rush

ADMINISTRATION
Alan N. Rosenberg
Senior Vice President/
Chief Administrative Officer

Christopher Guadagnino, PhD
Interim Lead, Communications

CONTACT US
Office of Communications
3509 N. Broad Street
Philadelphia, PA 19140
215-707-4839

TEMPLE HEALTH
TempleHealth.org
1-800-TEMPLEMED

Lewis Katz School of Medicine at Temple University
Temple University Hospital
Temple University Hospital Episcopal Campus
Temple University Hospital Northeastern Campus
Fox Chase Cancer Center
Fox Chase Cancer Center at Buckingham
Fox Chase Cancer Center Medical Group
Jeanes Hospital
Temple Health Oaks
Temple Health Center City
Temple Health Elkins Park
Temple Health Ft. Washington
Temple ReadyCare
Temple Physicians, Inc.
Temple University Physicians
Temple Transport Team

Temple Health refers to the health, education, and research activities carried out by the affiliates of Temple University Health System, Inc. (TUHS), and the Lewis Katz School of Medicine at Temple University. TUHS neither provides nor controls the provision of health care. All health care is provided by its member organizations or independent health care providers affiliated with TUHS member organizations. Each TUHS member organization is owned and operated pursuant to its governing documents.

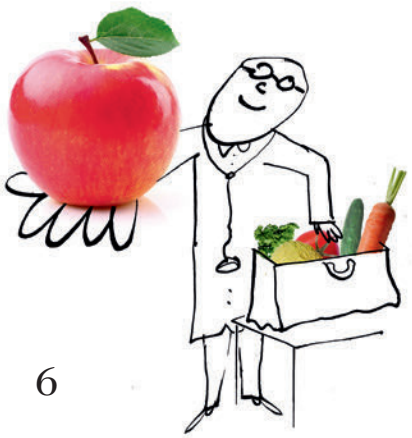
CONTENTS

FEATURES

DEPARTMENTS

IN EVERY ISSUE

ON THE COVER: Temple Health's CEO, Larry R. Kaiser, MD, FACS. Photograph by Colin Lenton.



LEFT: COLIN LENTON; TOP RIGHT: CARDONI; BOTTOM LEFT: SERGE BLOCH; BOTTOM RIGHT: BRIAN CRONIN

CURRENTS

Opioid-Addicted and Pregnant

Skyrocketing rates of maternal opioid use are leading to medical issues for mothers and infants — and to higher costs of care. To complicate matters, many drug treatment programs do not accept pregnant women addicted to opioids. Yet that is precisely what the Temple Wedge Opioid (TWO) program was designed to do.

Funded by a $500,000 grant from the Commonwealth of Pennsylvania, TWO is a collaboration between Temple and the Wedge Center, a community-based drug and alcohol treatment facility based in North Philadelphia. The program will serve approximately 300 women each year, with state-of-the-art services integrating primary care, behavioral health, and addiction treatment.

TWO is led by Laura Goetzl, MD, MPH, Professor of Obstetrics, Gynecology, and Reproductive Sciences at the Lewis Katz School of Medicine (LKSOM); Laura Hart, MD, Assistant Professor of Obstetrics, Gynecology, and Reproductive Sciences; and Mary Morrison, MD, Vice Chair for Research in Psychiatry — with the support of other Temple experts, including clinical anesthesiology. As Morrison notes, pain control is an important issue during pregnancy and delivery. "We address our clients' needs compassionately and competently," she says.

Another partner in TWO is the Maternity Care Coalition, a Philadelphia-based organization that serves women and infants. The Coalition provides peer-counseling for TWO's clients, along with case-management services to connect them to housing, food, clothing, transportation, and other resources.

Funding for TWO comes from the Commonwealth's Centers of Excellence initiative to combat opioid addiction across the state. Additional support comes from Health Partners Plans.

"I applaud Temple for recognizing that substance use disorder is a disease, not a choice, and I want to thank them for doing their part in battling this epidemic," said Pennsylvania Governor Tom Wolf.

Photograph by CLINT BLOWERS

Can't Catch the Fox

Only 47 institutions in the U.S. (just two in Philadelphia) hold the Comprehensive Cancer Center designation of the National Cancer Institute — a distinction Fox Chase Cancer Center has maintained since 1974.

"This designation is the gold standard in cancer care and research," says Richard I. Fisher, MD, President and CEO of Fox Chase Cancer Center. "Comprehensive Cancer Centers perform groundbreaking research, provide state-of-the-art education, and create innovative cancer prevention and control programs."

In addition, Fox Chase has again earned full reaccreditation from the Commission on Cancer of the American College of Surgeons; was recently designated a National Pancreas Foundation Center (the only center in the Philadelphia region to earn this distinction); and was recently listed among the "100 Best Hospitals and Health Systems with Great Oncology Programs" by *Becker's Hospital Review*.

STUDENTS AT THE LEWIS KATZ SCHOOL OF MEDICINE RUN

50+

COMMUNITY SERVICE GROUPS

SAMEER KHAN

Larry Kaiser, MD, FACS

Kaiser Named Lewis Katz Dean

Last fall, Temple University celebrated the first endowed dean's position in University history — and installed Larry R. Kaiser, MD, FACS, head of Temple Health, as its inaugural holder.

The endowment for the chair, named in honor of the late Temple University Trustee Lewis Katz, CST '62, was directed to the school of medicine by Katz before his untimely death in 2014. It is part of the largest philanthropic donation Temple has ever received. As befits the man and his generosity, now both the School of Medicine and its Dean's position are named in Katz's honor. The school naming was celebrated in the fall of 2015, and the investiture of Kaiser as the Katz Dean last fall.

"Who better to be named as the Lewis Katz Dean than Larry Kaiser," said Temple University Board of Trustees Chair Patrick J. O'Connor during the investiture ceremony. "He's a world-class leader in academic medicine. His passion, vision, and ambition have taken Temple to the next level."

Temple University President Richard Englert, EdD, spoke enthusiastically about the ways in which Kaiser, as the Lewis Katz Dean of Temple University's school of medicine, will extend Katz's vision.

Katz's son, Drew Katz, who took his late father's place on the University Board of Trustees, said that having his father honored in these ways "means everything to our family. Temple gave my father his start in life," he said, clearly moved to see his father's name and legacy live on.

Other speakers extolled both Katz and Kaiser during the celebration, including Steven Houser, PhD, Senior Associate Dean for Research; Amy Goldberg, MD, FACS, the Peters Chair of Surgery; and Lindy Snider, Fox Chase Cancer Center Board member and Dr. Kaiser's wife.

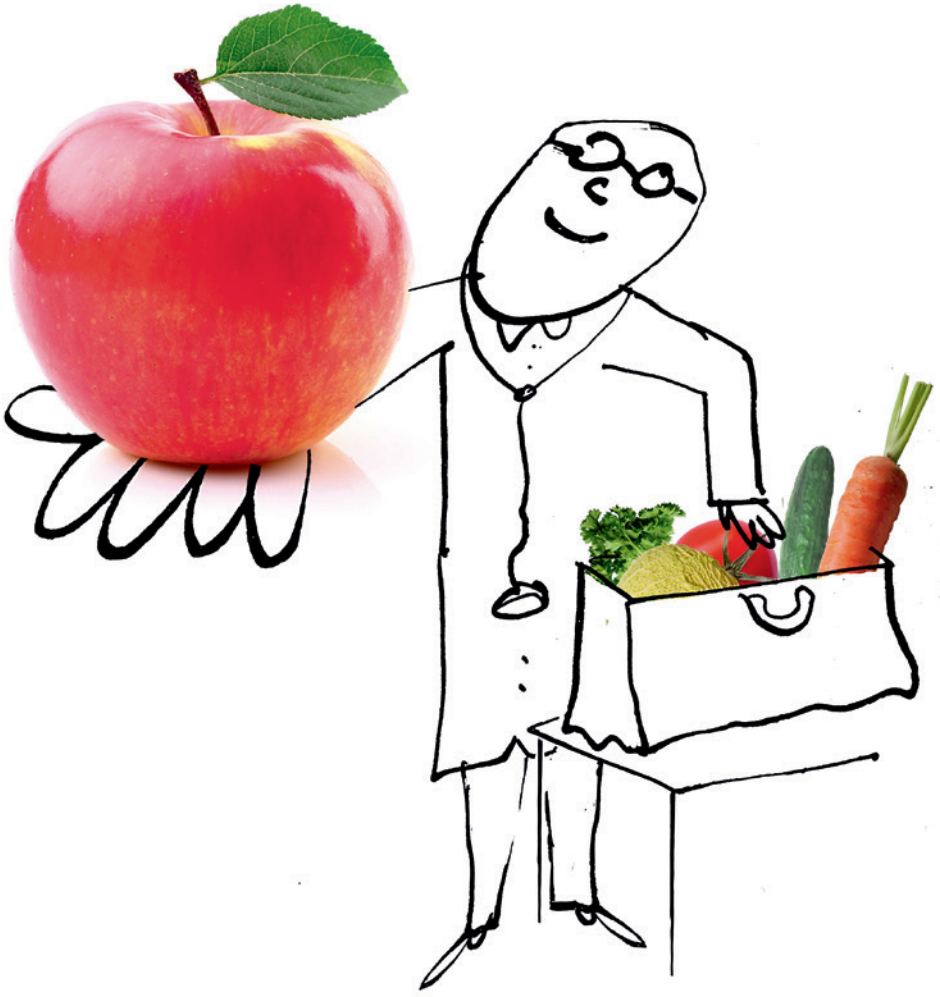
Kaiser, who also serves as Senior Executive Vice President for Health Affairs at Temple University and President and CEO of Temple University Health System, spoke last. "The Lewis Katz Dean's Chair will have a powerful impact on my ability — and that of all the deans who follow me — to advance the School of Medicine. To be the inaugural holder of this chair — which was endowed by someone who had become a dear friend to me — is one of the great honors of my life."

Farm to Families

Fresh food is hard to come by in North Philadelphia. That's why, during medical school, Drs. Brandon Swed and Matthew Kauffman, 2016 graduates of the Lewis Katz School of Medicine, mounted a campaign to urge Temple University Hospital to partner with the St. Christopher's Foundation for Children on "Farm to Families," a program that provides organically grown produce and meat at discounted prices. Their efforts were fruitful. Temple joined the program. Now Temple physicians can give patients access to the program with a "FreshRx prescription," a coupon that entitles them to pick up fresh fruits, vegetables, meat, and eggs at discounted prices at the hospital every week.

"Every day, our pediatricians see children struggling with diet-related illnesses as well as families at-risk for food insecurity," says Kathleen Reeves, MD, Senior Associate Dean for Health Equity, Diversity, and Inclusion at the Lewis Katz School of Medicine.

More healthy food-related news: Temple University Hospital and Jeanes Hospital were recently honored at Philadelphia City Hall for their efforts to reduce and prevent chronic disease by serving healthy food to patients, employees, and visitors as part of the "Good Food, Healthy Hospitals" initiative, a voluntary program led by the Common Market, a nonprofit local food distributor, in collaboration with the Philadelphia Health Department's "Get Healthy Philly" program.



SERGE BLOCH

Another Big Brain Grant

Temple University has been selected to help lead a $20 million, two-year program for brain injury research. Collaborators are the U.S. Army Research Laboratory and the Universities of Southern California, Southern Mississippi, and North Texas. Funding comes from the U.S. Department of Defense.

The goal of the program, led by Michele Masucci, PhD, Temple University's Vice President for Research, is to decrease brain injuries by creating a new class of materials for use in protective head gear. As such, the research leverages Temple's expertise in head injury assessment and in advanced materials development.

"The project will develop technologies that can be commercialized and brought to market, broadening the benefits to society at large," says Stephen Nappi, Temple's Associate Vice President for Technology Commercialization and Business Development.

Temple's research team includes T. Dianne Langford, PhD, Associate Professor of Neuroscience and Neurovirology, who is also helping to lead the largest-ever study of concussion in sports, a landmark $30 million National Collegiate Athletic Association-U.S. Department of Defense initiative called CARE, Concussion Assessment, Research and Education.

Temple University is internationally recognized for research and educational innovations in basic and translational neuroscience.

FACT Secrets Revealed

Researchers at Fox Chase Cancer Center have devised a technique to uncover previously inaccessible DNA in human cells in the laboratory. Now, for the first time, it can be studied. "This breakthrough in basic cancer biology opens the door to the development of a new generation of cancer drugs," says Vasily Studitsky, PhD, Co-Leader of Cancer Epigenetics at Fox Chase.

The discovery pertains to FACT, a protein involved in many cellular processes, including gene regulation and cancer development. While FACT is a common target of anti-cancer drugs, its mechanism of action remained a mystery until Studitsky's team determined the way it can unspool DNA coiled together with the proteins (histones) that normally keep it packaged inside cell nuclei. Once this happens, the DNA is then available for interacting with other regulatory proteins — a process that could lead to the uncontrolled cellular replication characteristic of cancer. Notably, when Studistky's team removed FACT, DNA packaging in the cell was normalized.

"These findings on how DNA becomes accessible to regulatory proteins in a regulated way could impact cancer research on a national scale — helping scientists better understand why some cells become cancerous," says Studitsky.

Studies related to the research appear in *Science Advances* and *Nature Structural & Molecular Biology*.

JOSEPH V. LABOLITO

Block by Block field specialists (L-R) Mariana Pardes, Rosemary Jackson, and Emily Gibeau.

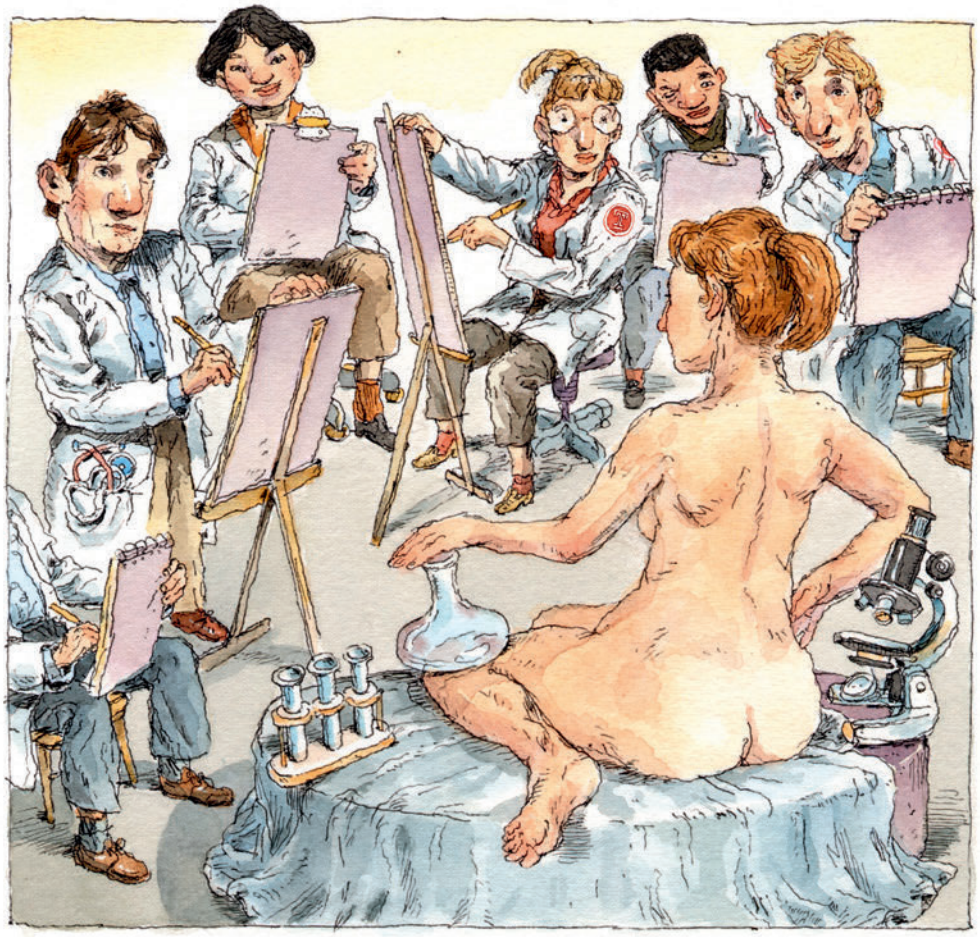
Block by Block

Yolanda Turner of North Philadelphia didn't know about the health benefits she could receive at Temple University Hospital until a research specialist named Rosemary Jackson of Temple's Block by Block program paid her a visit at home. Now Turner calls her experience with Block by Block "life-changing."

Going door to door, Jackson and colleagues visit residents in 11 zip codes in North Philadelphia. Their goal is to survey community members' health and wellness, and connect them with health programs and clinical research opportunities at Temple. Block by Block's founder, Susan Fisher, MS, PhD, Temple Clinical Research Institute Director, says the program is enabling Temple to better understand the health problems of area residents and to address those needs through participation in research and health promotion strategies. Fisher is also the school's Associate Dean of Clinical Research. For more about the program, which has enrolled more than 1,200 participants to date, see page 36.

Emergency Awards

The American Academy of Emergency Medicine renamed its academic leadership award in honor of Robert McNamara, MD, MAAEM, FAAEM, Professor and Chair of Emergency Medicine at Temple. The McNamara Award recognizes an individual who has made an outstanding contribution to academic leadership. The organization gives another award named for a Temple faculty member as well: The Joe Lex Educator of the Year Award. Lex is a Clinical Professor of Emergency Medicine.



The Art of Doctoring

Temple's Tyler School of Art has designed an art class especially for students at Temple's Lewis Katz School of Medicine. During class, students draw the human body, observing nude models. They visit museums to explore renderings of the human form.

Scott K. Shore, PhD, who initiated the offering, says art training adds an essential element to the medical school curriculum. "Dissecting a cadaver to learn about the human form is one thing. Observing the living body with an artist's careful attention to form and function is another," says Shore, Associate Dean for Graduate Studies at the school.

Isaac Wegner, a student in Temple's postbaccalaureate medical school preparatory program, says drawing is a skill worth cultivating. "My dad is a cardiothoracic surgeon and always draws the heart and the major valves for patients," he says. "It helps them visualize what's happening inside of them and what's going to be done to save their lives."

According to Douglas Reifler, MD, Associate Dean of Student Affairs and Professor of Medicine, medical schools across the country are looking to the humanities — art, literature, drama, and dance — to help develop their medical students. In addition to art class, Temple students can develop their powers of observation and expression through narrative medicine workshops (see page 42). They even took a cooking class that was taught by the *Philadelphia Inquirer*'s food editor: an eight-week course on creating healthy, affordable meals from scratch.

Observant, empathetic doctors are not made by hard science alone.

JOHN CUNEO

Immune Mechanism Discovered

Temple researchers have identified a cellular protein that senses the presence of influenza virus in the lung and rapidly destroys the infected cells. "This sensor, a protein called DAI, recognizes viral RNA and sets off a powerful auto-destruct program to prevent the infected cell from becoming a virus factory," said Siddharth Balachandran, PhD, Associate Professor and Co-Leader of the Blood Cell Development and Function program at Fox Chase Cancer Center, who is lead author of the study, published last October in *Cell Host & Microbe*. Without DAI, influenza-infected cells continue producing more virus. But with DAI, infected cells kill themselves, helping to curb the spread of the virus. As Balachandran notes, this discovery opens new doors to research with exciting therapeutic ramifications. The University of Texas, St. Jude Children's Hospital, and the Icahn School of Medicine at Mt. Sinai contributed to the research.

FOX CHASE CELEBRATES

43

CONTINUOUS YEARS OF NCI COMPREHENSIVE CANCER CENTER STATUS.

Good Numbers

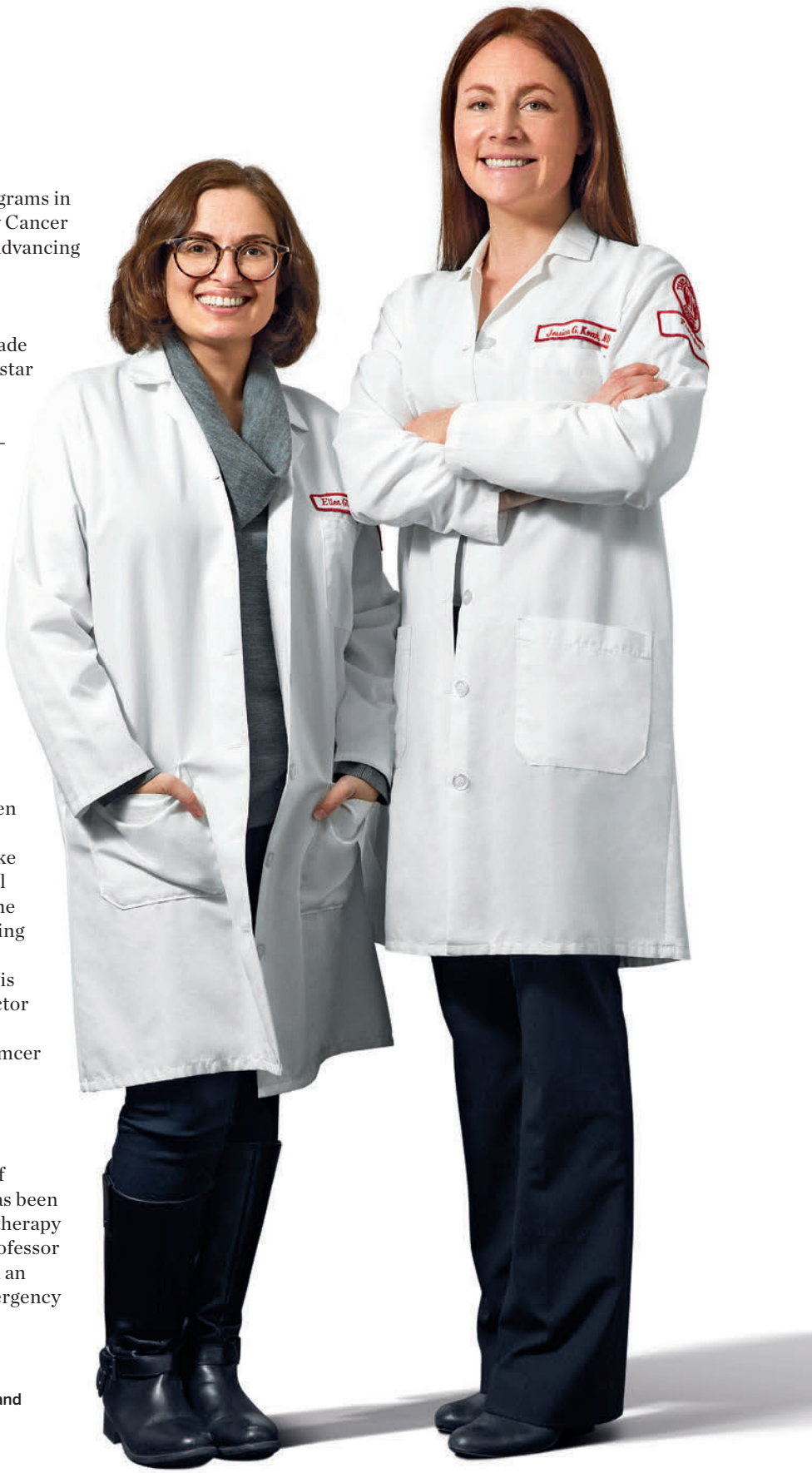
1 OF 8 NATIONWIDE:
Fox Chase Cancer Center is one of eight cancer programs in the nation to receive the Association of Community Cancer Centers Innovator Award, signifying excellence in advancing cancer care.

TWO NATIONAL 5-STAR AWARDS:
Jeanes Hospital and Temple University Hospital made Healthgrades' 2016 "Five-Star Hospital" List. Five-star hospitals demonstrate superior outcomes in select procedures. Jeanes Hospital also received an "A" rating from Leapfrog, a national nonprofit organization that evaluates more than 1,800 hospitals annually for quality and safety.

18TH IN THE WORLD:
According to Cybermetrics Lab, Temple University ranks 18th among universities internationally for Google Scholar citations of faculty work — a measure of scholarly influence. At 18, Temple University outranks Princeton University (19), New York University (25), and the University of Pennsylvania (44).

THREE FOR NATIONAL APA EXCELLENCE:
Three faculty members of Temple's Department of Clinical Psychiatry and Behavioral Science have been honored by the American Psychiatric Association: Ellen Gluzman, MD, received the 2016 Nancy Roeske Certificate of Recognition for Excellence in Medical Student Education. Jessica Kovach, MD, received the 2016 Irma Bland Certificate of Excellence in Teaching Residents. And Nicole Bizamcer, MD, PhD, MPH, received the 2017 Irma Bland Certificate. Gluzman is Assistant Professor of Clinical Psychiatry and Director of Medical Student Education. Kovach is Associate Professor and Director of Residency Training. Bizamcer is Associate Professor of Psychiatry and Medical Director, Outpatient Psychiatry.

TWO FIRST FELLOWS:
Eric Horwitz, MD, FABS, the Gerald Hanks Chair of Radiation Oncology at Fox Chase Cancer Center, has been named an inaugural fellow of the American Brachytherapy Society; and Ernest Yeh, MD, FAEMS, Associate Professor of Emergency Medicine at Temple, has been named an inaugural fellow of the National Association of Emergency Medicine Physicians.



Ellen Gluzman, MD, and Jessica Kovach, MD

JOSEPH V. LABOLITO

TLC Goes GOLD

Philadelphia was ground zero in the fight against Chronic Obstructive Pulmonary Disease (COPD) last fall, when 450 of the world's leading lung specialists gathered for the first-ever international symposium of GOLD, the Global Initiative for Chronic Obstructive Lung Disease.

The conference, led by Temple Lung Center (TLC) Director Gerard Criner, MD, FACP, FACCP, Chair and Professor of Thoracic Medicine and Surgery at Temple, focused on best practices for COPD management, unveiling the 2017 edition of the *Global Strategy for the Diagnosis, Management and Prevention of COPD*.

"I've been treating COPD patients for 33 years, and the research is moving faster than ever before," Criner says.

COPD is the third-leading cause of death in the nation.

In the Zone

Temple University Health System is part of a new state-sponsored Health Enterprise Zone (HEZ), a plan to address health disparities for nearly 300,000 Medicaid recipients in low-income North Philadelphia, where deep poverty can affect not only health, but also education, employment, and economic opportunities.

The HEZ initiative, created by the Pennsylvania Department of Human Services, will bring government, health care providers, and community stakeholders together in four subcommittees — Community, Technology, Health, and Education — to develop innovative community-based, sustainable approaches to reducing health disparities, improving health outcomes, and stabilizing and reducing health care costs.

"The HEZ will address the social determinants of health and the unmet social needs that impact health outcomes," explains Susan Freeman, MD, Chief Medical Officer of Temple University Health System.

"The point is to look at barriers to living a healthy life and work toward giving people the capacity to be healthy," says Kathleen Reeves, MD, Senior Associate Dean at Temple's Lewis Katz School of Medicine.

According to Temple University President Richard Englert, EdD, "Temple University has been at the forefront of designing and providing high-quality health care for our neighboring communities, including those with the greatest need and the least ability to pay."

DANIEL BEJAR

In Charge

Martin J. Edelman, MD, a nationally renowned lung cancer expert, has been named Chair of Hematology/Oncology at Fox Chase Cancer Center.

Wafik El-Deiry, MD, PhD, FACP, Deputy Director, Fox Chase Cancer Center, has been named the William Wikoff Smith Endowed Chair in Cancer Research — endowed by the W.W. Smith Charitable Trust.

Amy J. Goldberg, MD, FACS, Temple Health Surgeon-in-Chief, has been named the George and Louise Peters Chair in Surgery — a Chair endowed by the late George Peters, MD, a 1933 graduate of the Lewis Katz School of Medicine.

Sylvia Hsu, MD, FAAD, a leading dermatologist, has joined the Lewis Katz School of Medicine as Chair of Dermatology.

F. Todd Wetzel, MD, Professor of Orthopaedic Surgery and Neurosurgery, has been named President of the North American Spine Society.

TEMPLE RANKS AMONG THE TOP
5%
IN THE NATION FOR LUNG TRANSPLANTATION

TOMMY LEONARDI

Camille Ragin, PhD, MPH

Four for Three

3 FOR KAISER:
Larry Kaiser, MD, FACS, head of Temple Health, received three recent honors. He has been named one of the nation's "Nonprofit Hospital and Health System CEOs to Know" and "Physician Leaders of Hospitals and Health Systems" by *Becker's Hospital Review*. Those listed represent successful and prominent nonprofit health care organizations, demonstrating outstanding leadership and clinical expertise to improve their organizations and the communities they serve. Kaiser also received the Pennsylvania March of Dimes Citizen of the Year Award, 2016.

3 DOCS OF DISTINCTION:
Three Temple physicians were named "Doctors of Distinction" by the *Philadelphia Business Journal*. Amy Goldberg, MD, FACS, received the Humanitarian Award. Gerard Criner, MD, FACP, FACCP, received the Medical Research Excellence Award. Darilyn Moyer, MD, FACP, received the Leadership in Medical Advocacy Award. Goldberg is the Peters Chair of Surgery and Surgeon-in-Chief at Temple University Health System; Criner is Chair of Thoracic Medicine and Surgery at the School of Medicine and Director of the Temple Lung Center; and Moyer is Clinical Professor of Medicine and Executive Vice President and CEO of the American College of Physicians.

3 HONORED BY ACS:
Three faculty members based at Fox Chase Cancer Center were honored by the American Cancer Society at the Greater Philadelphia Volunteer Awards last fall: Wafik El-Deiry, MD, PhD, FACP, received the Scientific Research Award; Camille Ragin, PhD, MPH, received the Cancer Control Award; and Alan Howald was recognized with the Volunteer Achievement Award. El-Deiry is Deputy Cancer Center Director; Ragin is Associate Professor in the Cancer Prevention and Control Program; and Howald is Associate Vice President of Business and Network Development.

3 FOR KIDNEY KUDOS:
Crystal Gadegbeku, MD, FAHA, FACP, FASN, Chief of Nephrology and Vice Chair of Community Outreach, has been named Chair of the American Society of Nephrology Policy and Advocacy Committee. Avrum Gillespie, MD, Assistant Professor of Medicine, was selected to participate in a White House initiative to establish a national clearinghouse for educational resources for kidney transplant and living donation. In addition, the 2016 Andrew Novick Memorial Lecturer Award, presented during the 15th International Kidney Symposium, went to Robert Uzzo, MD, FACS, Chair of Surgical Oncology at Fox Chase.

Larry Kaiser on Temple Health:

Mission *Unmatched*

Academic medicine is a complex, costly, high-risk enterprise under the best of circumstances. Now imagine trying it when your flagship hospital — traditionally your main revenue generator — sits in one of the deepest pockets of poverty in America.

Such is the challenge that Temple Health has faced for more than a century.

Since 2011, Temple Health has been led by Larry R. Kaiser, MD, FACS, a physician executive and a nationally respected voice in health care market reform. Kaiser has held leadership posts at the University of Pennsylvania and the University of Texas — among other big-name organizations.

Despite unrelenting headwinds, Kaiser and his team have transformed Temple Health into a $2 billion enterprise of growing regional and national importance.

Difficult circumstances typically impede progress. But they can also *inspire* it.

We asked Kaiser to reflect on what accounts for the difference. And to talk about the difference that Temple makes.

By GISELLE ZAYON
Photography by COLIN LENTON

Larry Kaiser, MD, FACS

Question:

Before coming to Temple, you were President of the University of Texas Health Science Center at Houston. But before that, you were Chair of Surgery at the University of Pennsylvania, just across town from Temple. You were at Penn for 17 years. So did you know Temple pretty well before you accepted the post?

Answer:

Yes and no. I thought of Temple as a no-frills kind of medical center, a place to roll up your sleeves and get to work. And it is. But I seriously underestimated the talent and expertise I would find here, the drive and grit. Temple has a moral compass unlike any I've seen.

There's a deeply ingrained culture of service at Temple that dates back to its founding days. The University had no wealthy benefactor, no endowment. It was a university built for the people, by the people, a brick at a time. As a result, every dollar counts at Temple. Nothing is taken for granted. Every resource is stewarded well.

Faculty and students come to Temple — and often stay — for the chance to work on the cutting edge of science with colleagues who see service as a privilege. This attitude permeates the organization. World-class clinicians buying new winter coats for local low-income school kids. Science with service. That's the heart of the place.

When you arrived at Temple in 2011, the organization had considerable financial challenges. Give us the bold strokes of the strategies you used to transform it into a $2 billion enterprise.

Unified management drives greater operational and financial efficiency. Therefore, integration was priority one. We assembled the clinical, research, and educational arms of the enterprise under a single umbrella, crafting interlocking objectives for each. In some areas, we consolidated. In others, we expanded. We've hired more than 350 faculty members since I've been here, fine-tuning key service lines and transforming a good enterprise into an even stronger one.

A key strategy entails diversifying Temple's payer mix and increasing its high-acuity volume. This helps us sustain Temple's outsized commitment to the underserved — and aligns perfectly with our educational mission. And it's worked. Our overall volume is up, and our high-acuity volume increased 24.5 percent between 2011 and 2016. In 2012, for example, we did 126 organ transplants, and in 2016, we did 296.

Another key strategy is to enlarge Temple's clinical footprint, bringing care closer to people in our secondary service area, where private insurers reimburse at more reasonable rates. We operate three multispecialty practice centers and four new urgent-care centers. As a result of the excellent care patients have received at those sites, more are coming to Temple from outside Philadelphia for ongoing care.

We've improved the entire system's operational efficiency.

We've instituted cost-containment actions, changed our revenue cycle, and rebuilt our supply chain. We've put unremitting focus on quality, safety, and value. Even with the considerable investments we've made — including $100 million in an electronic health record system just last year — we were able to achieve positive annual operating margins for two years running for the first time in 20 years. Yet pressures in the marketplace continue to increase.

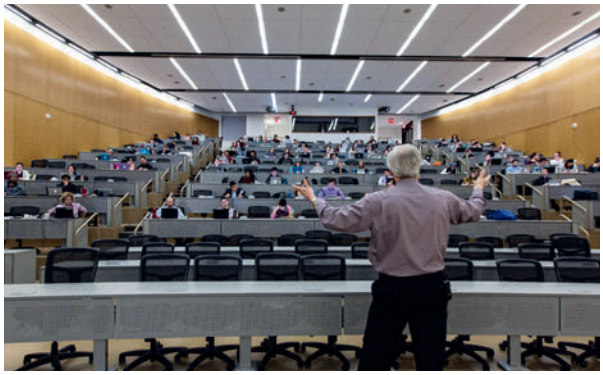
In 2011, Temple acquired Fox Chase Cancer Center.

Yes. This partnership is hugely important. Fox Chase is a jewel of an organization with an extraordinary reputation on all fronts: patient care, research, education, and community service. It is one of just 47 NCI-designated comprehensive cancer centers nationwide, and one of the very best in the country. Temple's association with Fox Chase elevates the Temple "brand" in every way.

What about other areas of expansion?

We have established new research centers in Population Health, Translational Medicine, Genomics, Clinical Research, Metabolic Disease, and an Office of Health Equity, Diversity, and Inclusion.

We've launched new educational programs, including a physician assistant program and the country's first master's degree in urban bioethics. Our programs respond to the evolving nature of medicine. Our students graduate exceedingly well-prepared.



Left: 2:30 p.m.: In North Philadelphia with Temple Community Health Worker Eugene Godonou. Top: An 8 a.m. class at the medical school on Biochemistry of Hormones of the Thyroid and Parathyroid Glands.Bottom: 5:20 p.m.: The second air-transport of the day at Temple University Hospital.

The New York Times *recently featured Temple University Hospital in a front-page story about hospitals bracing for the repeal of the Affordable Care Act (ACA).*

For decades, Temple has been known nationwide for squaring itself against the toughest health care challenges of the day — and thriving; therefore, the *Times* wanted our perspective on threats to the ACA.

With 20 million people at risk of losing insurance coverage, wholesale repeal of the ACA could incite a bona fide public health crisis in America. Hospitals stand to lose $165 billion through 2026. The stakes are especially high for hospitals that are caretakers of communities in "Deep Poverty," the Census designation denoting family income of less than half the federal poverty level of $24,300 for a family of four. About a third of the people in Temple University Hospital's primary service area somehow manage to live on this income.

If the ACA is repealed, Temple University Hospital will absorb the cost of caring for uninsured patients to the tune of about $45 million per year. Even *with* the ACA, the hospital operates on a thin margin. Last fiscal year, Temple Health had revenues of $2 billion, yet netted just $3.6 million. A margin of 0.2 percent, compared to the 5 percent average margin in the state. Why the difference? Payer mix. Medicare and Medicaid contribute a markedly disproportionate share of Temple University Hospital's revenue: about 85 percent. Public programs reimburse at far lower rates than commercial insurers. That makes our margin difficult to maintain. We must deliver high-quality care without outspending what we recoup.

Health care financing is a world of shifting sands. The only predictable factor is this: Temple will continue to embrace patients other hospitals turn away. This makes us indispensable. A critical access point for public health in the largest American city without a public hospital. A world-class academic medical center that goes miles beyond what most public hospitals do.

Temple crafts population-based approaches that keep patients *out* of the hospital. We're the leading regional provider of disaster relief and emergency medical response. We educate tomorrow's health care workforce — and lead world-class research that's advancing diagnostics, treatments, preventions, and cures. Temple's biomedical research funding doubled during the past four years.

With nearly $80 million in NIH research funding, Temple Health has catapulted Temple University to top-tier Carnegie Classification last year, the pinnacle benchmark of research funding productivity, the nation's top four percent. And with more than 10,000 employees, Temple's health system is essential to Philadelphia's economic engine.

Recognizing its unique, outsized mission, the Commonwealth of Pennsylvania gave Temple University

We have made innovative business deals. Our contract with GE Healthcare, forging a partnership for radiology service and technology, is a world-first. A contract based on mutual risk. And it's producing the intended results.

We have created world-class programs in robotic surgery and cardiothoracic surgery; were the first in the nation to establish a Department of Thoracic Medicine and Surgery that integrates medical care, surgical care, and research; and were the first in the region to establish a familial cardiomyopathy program — as well as vascularized lymph node transfer surgery for lymphedema, a dedicated Limb Salvage Center, and a Head and Neck Institute. We were also the first in the world to excise the DNA of HIV from cultured human cells and then live animals, and to find a link between vitamin D and pancreatic cancer.

> I have come to appreciate the value, the necessity, of social conscience in health care. It is a moral and professional imperative that Temple embodies.

Our faculty members hold leadership positions in major organizations. And teach. And edit major journals and texts. All while caring for the poor, the rich, and everyone in between.

We are in a much stronger position today, yet because of the twin challenges of maintaining high-tech and safety-net missions, Temple Health remains in a fragile state — which makes ongoing advocacy for its unique role imperative.

Concurrent with his duties as health system CEO and medical school dean, Kaiser maintains a limited practice in thoracic surgery.

Hospital its very first appropriation in 1901 — and has been partnering with us ever since. We are grateful to all who back our linchpin roles. Absent sustained investment, could any organization embrace the enormity of Temple's charge?

Your job sounds political.

Academic medical centers are foundries of health care progress in America. They create new modes of care — and educate new generations of professionals to deliver it. This means keeping expensive facilities, technologies, and experts at-the-ready 24/7. The things that affect academic medicine affect the health of all Americans. Lives, quite literally, are at stake. So, yes, my job is political.

With the squeeze on the public coffers, health care financing is a story with a familiar theme: doing more with less. Policymakers often see cuts to Medicare and Medicaid payments as a means to reduce federal costs. For a place like Temple University Hospital, offsetting this loss remains a daunting challenge. The actual cost of providing care exceeds what public payors reimburse. And the cuts continue.

> Health care financing is a world of shifting sands. The only predictable factor is this: Temple will continue to embrace patients other hospitals turn away.

Cuts in Medicare support for graduate medical education, for example, are causing a bottleneck in the number of available residency positions nationwide. It won't matter how many medical students we get into the pipeline if hospitals can't afford to bring on more residents and fellows — thus the physician shortage remains unaddressed. It's my job to remind lawmakers of things like this. Moreover, Medicare payments to hospitals do not cover physician costs. We must therefore compensate physicians with alternative revenue streams. Another stark reality: Medicare penalizes hospitals that treat the most vulnerable and medically complex patients.

Penalizes?

In 2013, Medicare stopped paying hospitals to treat patients readmitted with the same diagnosis within 30 days of discharge from a prior stay. Incentivizing hospitals to keep patients well is a worthy goal, yet a far taller order for hospitals whose patients struggle to keep food in the house, a roof over their heads. The playing field in America is far from level. That's the reality safety-net hospitals — and reimbursement policies — must address.

Temple's population health innovations improve care delivery and reduce costs. Our Community Health Worker program helped reduce Temple University Hospital's 30-day Medicare readmit rate from 25.2 percent to just 16.2 percent. Temple offers the region's only state-certified training program for community health workers.

When it comes to addressing the social determinants of health — which affect the poor disproportionately — Temple's expertise is second to none. We weighed in with Congress on the need to factor socioeconomic disparities into a more equitable hospital readmission rate policy — and were pleased to see it included in the 21st Century Cures legislation passed last fall. I'm proud of our expertise.

Tell us about what Temple hopes to tackle.

Temple is at the vanguard of some of the most important topics that medicine will face in this century. We are building on our strengths in urban bioethics and population health, particularly as health care moves from a reactive stance to an anticipatory one. Increasingly, health care is a business of preventing and managing chronic conditions, with the locus of care moving from the inpatient setting to the outpatient setting and to the home. We are using technology that alerts caregivers to patient-condition changes that require intervention — often before the patient is even aware of the change. Going forward, we're going to see more digital medicine and tele-health, more virtual visits, and at-home monitoring.

We're exploring new, value-based health care delivery and reimbursement models. And placing greater focus on critical care, end-of-life care, and quality of life. We must help patients exercise greater *personal* responsibility for health. Education, for professionals and for patients, is Temple's mission. Education is the key that unlocks all doors.

You're CEO of Temple University Health System; University Senior Executive Vice President for Health Affairs; Professor of Thoracic Medicine and Surgery — and now also hold the first endowed dean's chair in Temple University history. What does it mean to you to be the Lewis Katz Dean?

Lewis Katz was one of the greatest friends Temple University — and I — ever had. To serve as the Lewis Katz Dean, to steward his ethos and vision, is one of the great honors of my life. Lewis was a natural philanthropist. His entire life was about giving. By elevating opportunity in others' lives, Lewis increased the value of his own. If I can bring to Temple even a small portion of the honor and commitment that the Lewis Katz name entails, I will be satisfied.

You've changed Temple. Has Temple changed you?

Working at Temple has brought home more clearly than ever before that society's inequalities are borne out in patterns of disease, that socio-economic determinants of health actually have greater impact on wellness than medical care. I have come to appreciate the value, the necessity, of social conscience in health care. It is a moral and professional imperative that Temple embodies.

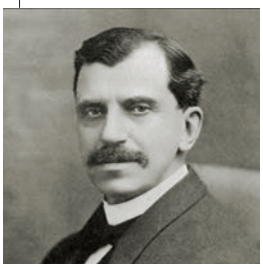
Is there a secret to good leadership?

Recasting onerous challenges into distinctive strengths.

For an appointment with a Temple physician, call 1-800-TEMPLEMED.

Temple University

1892



1892

1900

12

Transformed *Yet* Unchanged

Hospital at

By VERDI J. DISESA, MD, MBA
President and CEO, Temple University Hospital

Philadelphia, 1892: The city has yet to see its first automobile. Or establish its public school system. Downtown has been "electrified," but the outskirts — where Temple University Hospital is about to be born — remain gas-lit.

People in search of a better life were pouring into Philadelphia. It was the place to be, the "Workshop of the World," dominating American manufacturing in every sector from train-building to textiles.

But it wasn't all pretty. Housing was ramshackle and overcrowded, without plumbing or heat. The Schuylkill and Delaware rivers supplied the city's drinking water — and also received its unfiltered waste. Between 1860 and 1909, some 28,000 Philadelphians died of typhoid fever alone. In those days, few lived past 50. If childbirth or infection didn't get you, an industrial accident just might.

In 1890, a group of physicians created the North Philadelphia Hospital. But it closed within a year, financially strapped. Low-income families hadn't the means to pay for medical care. That meant North Philadelphia's nearest hospitals were several miles away — practically another country, measured by the speed of a horse-drawn ambulance. Something needed to be done.

Eyes turned to Reverend Russell Conwell, the North Philadelphia pastor who created Temple College, in his Baptist Temple, in 1884. Conwell agreed to create a hospital that would provide its services at no charge — welcoming all, regardless of race, nationality, religion, or any other factor. He found a site for the hospital: a three-story house at 3403 Broad Street. He raised the funds to purchase it. And persuaded North Philadelphians that, with no revenue, converting that house into a hospital — and keeping it afloat — would depend on volunteer commitment.

On Christmas Day 1891, a fund raiser brought in money, furniture, lumber, linen, cooking utensils, and more. People worked unpaid as carpenters, plumbers, and painters to transform the house into a hospital. John Wanamaker (of former Philadelphia department store fame) donated the drapery for all 50 windows of the hospital. Peter A.B. Widener, magnate of Philadelphia's largest trolley car manufacturer and founder of U.S. Steel, donated the two horses that would dutifully pull the hospital's ambulance for 10 years.

GROCERY BILL
In 1915, Temple University Hospital's Dietary Department spent $703.95 on ice, $4,222.45 on butter and eggs, and $499.63 on seafood.

Management of the new Samaritan Hospital, as it was named, was entrusted to a Board composed of community members and physicians. Conwell was President. The Vice President and Medical

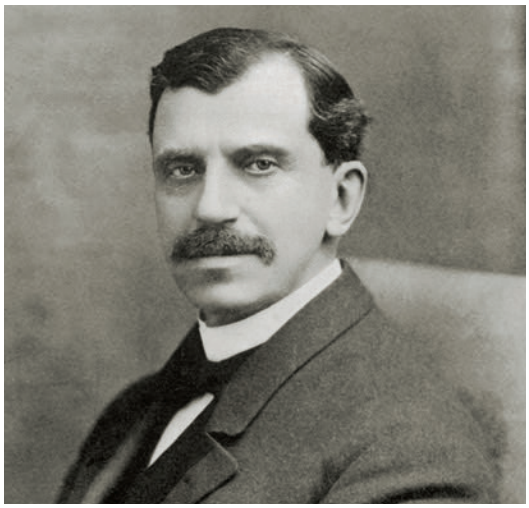
ARCHIVAL IMAGES:TEMPLE UNIVERSITY LIBARY SPECIAL COLLECTIONS RESEARCH CENTER

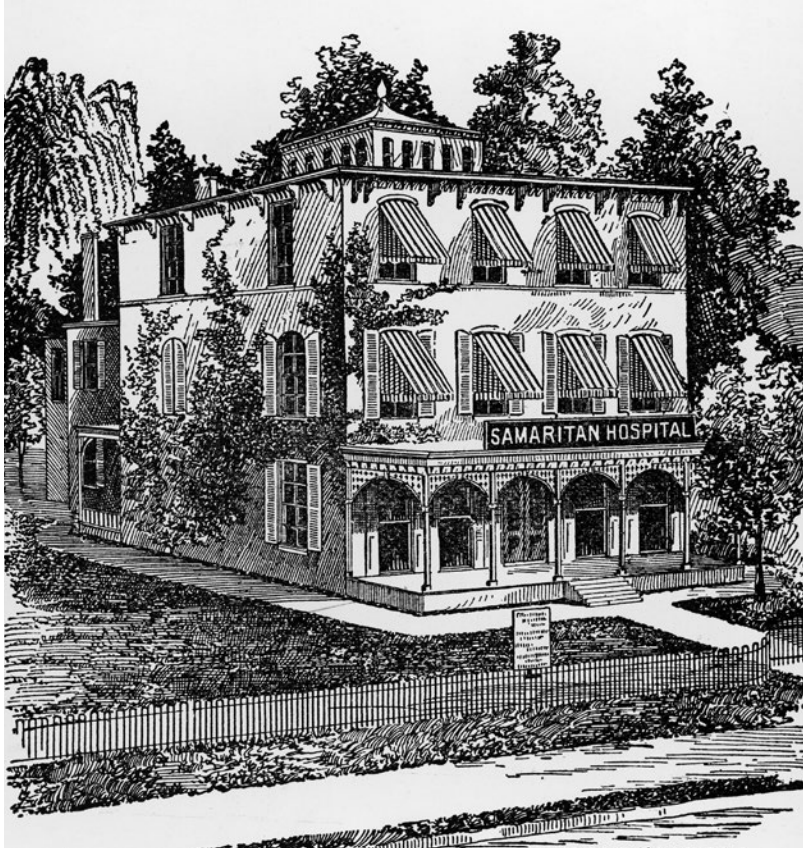
Director was W. Frank Haehnlen, MD. A Board of Lady Managers would attend to the hospital's domestic concerns. The hospital had two paid staff: one physician and one nurse. Its operating budget was $6,000 per year.

Samaritan Hospital opened on February 1, 1892. It had 20 beds, an operating room, a dispensary (outpatient clinic), a parlor, kitchen, dining room, and separate wards for women and men.

The hospital "presents an appearance, inside and out, of a large private home rather than a hospital — a feature quickly observed and highly appreciated by patients," noted the Report of Samaritan Hospital, 1892.

The tiny hospital logged 202 inpatients and 1,448 outpatients in its first year. Onward and upward it went from there.





Left: Russell Conwell. Right: Samaritan Hospital, 1892

Constancy and Change

The Temple University Hospital story is two stories. One about dramatic growth and change, the other about unchanging commitment to mission.

"Temple is the birthplace of stereotactic surgery, the field of physical medicine and rehabilitation, and other amazing innovations," says Temple Health's CEO, Larry Kaiser, MD, FACS. "At the same time, the hospital has been the iconic 'family doc,' at the ready, 24/7 for 125 years."

Balancing change and constancy requires ingenuity. Conwell certainly had that. In fact, he created something that did not exist at the turn of the 20th century: a multi-hospital system. Within six years of founding Samaritan, he opened

Temple over Time

1892

Rev. Russell Conwell, Temple University's creator, founds Samaritan Hospital. The 20-bed hospital opens on February 1, and cares for 202 inpatients and 1,448 outpatients in its first year.

1893

The School of Nursing opens at Samaritan. In 1902, the hospital also opens a school of Pharmacy — and becomes the clinical campus of Temple's new medical school.

1898

With Samaritan's services in great demand, Conwell opens **Greatheart**, a maternity hospital, next door to Samaritan.

1902

Dr. W. Wayne Babcock, inventor of Babcock forceps and first to use spinal anesthesia in the U.S., becomes Chair of Surgery.

1903

When a balcony collapses at **Philadelphia Baseball Park** on August 8, Samaritan handles its first mass-casualty event (the worst disaster in American sports spectating history).

a maternity hospital next door (Greatheart Hospital) and acquired a 75-bed general hospital called Garretson Hospital (18th and Buttonwood Streets). In 1923, he added the 30-bed Joseph Price Maternity Hospital (1810 Spring Garden Street) to the group, all to meet urgent community needs — which meant a large focus on maternal/infant health and emergency care, mainstays of TUH's expertise today.

When a factory exploded on February 5, 1892, Samaritan treated its first trauma patients (just four days after opening). And mobilized its first mass-casualty response on August 8, 1903 — admitting 70 patients in one hour — after a balcony collapsed at Philadelphia Baseball Park (the worst disaster in American sports spectating history). Surrounded by factories, Garretson Hospital responded to accidents and injuries daily. Baldwin Locomotive Works, a 17-acre plant employing 19,000 workers, was right next door.

The factories are long gone, but today Temple University Hospital treats approximately 2,000 trauma patients yearly (in addition to 140,000 other emergency room patients). Temple was among the first in Pennsylvania to achieve Level I trauma certification, and remains the only hospital in Philadelphia with a trauma center and a burn unit. This expertise proved indispensable in the wake of the Amtrak train derailment on May 12, 2015, the largest mass-casualty event in recent Philadelphia history. Numerous hospitals responded, but the greatest number of patients (and most severely injured) were taken to Temple.

The roots of Temple's services for women and infants go just as deep. In addition to selecting an obstetrician/gynecologist as Samaritan's first medical director, Conwell recruited superbly qualified physicians for women and children, such as Jesse Arnold, MD, an early expert on eclampsia and post-partum hemorrhage; James McKee,

BEDAZZLING BED COUNT

Temple University Hospital opened in 1892 with 20 beds. By 1905, it had 110 beds. By 1930, it had 370 beds. The peak came in 1956, when the hospital had 1,000 beds. Today it has 732.

Outpatient Clinic, 1895

1907

Conwell acquires the 75-bed **Garretson Hospital** (originally the Medico-Chirurgical Hospital) at 18th & Buttonwood Streets.

1915

Dr. John Kolmer develops one of the first treatments for syphilis — and goes on to develop one of the first polio vaccines and one of the first polio clinics in the nation.

1923

Conwell adds the **Joseph Price Maternity Hospital** (18th and Spring Garden Streets) to the "system."

1928

Dr. Frank Krusen opens the nation's first physical medicine and rehabilitation unit.

1929

Samaritan's name becomes Temple University Hospital. **Dr. William Parkinson**, a 1911 graduate of Temple's medical school, becomes Dean and chief hospital administrator, roles he held for 30 years.

ARCHIVAL IMAGES: MEDICAL SCHOOL MATERIAL AND TEMPLE UNIVERSITY LIBRARIES SPECIAL COLLECTIONS RESEARCH CENTER; BASEBALL PARK: WIKIPEDIA.ORG

MD, President of the Philadelphia Pediatric Society (1905); and Harriet L. Hartley, MD, who'd been Chief of Child Hygiene for the City of Philadelphia when Conwell recruited her in 1919. Perhaps Temple's most famous pediatrician was Waldo Nelson, MD, who wrote *Nelson's Textbook of Pediatrics*, still the world's leading textbook in the field after 75 years. Fast forward to the 1960s, when Temple ran one of just five NIH-funded National Women's Health Programs in the nation — a comprehensive program that served thousands of women and infants for more than 30 years.

Today, as a Blue Distinction Center for Maternity Care, Temple remains a destination for high-risk maternal and infant care. Right now, Temple's Baby Box program — a program designed to help reduce Philadelphia's unacceptably high rate of infant mortality — is attracting a flood of media attention. A portable bassinet, complete with infant-care items, the Baby Box is given free to all mothers who deliver at the hospital. Its goal is to give parents a safe place for their infants to sleep, as "co-sleeping" with parents puts infants at risk. Dozens of hospitals across the nation are now instituting it, and New Jersey and Ohio have enacted universal baby box programs across their states.

THE PRICE WAS RIGHT

In 1966, Temple University Hospital charged $8.25 for a lower leg cast, $5.50 for a pair of crutches, $15.60 per day for oxygen, $20 for an electrocardiogram, and $33 to deliver a baby.

Emergency Clinic, 1897

Temple Tutelage

The Baby Box is part of SAFE-T, Sleep Awareness Family Education at Temple, a patient *education* program. One of thousands the hospital has provided over the years. Today, Temple's patient and community education initiatives touch about 70,000 people yearly. Temple's violence-prevention education programs have garnered national media attention and prestigious awards.

In the Conwell tradition, Temple University Hospital also provides opportunity-enhancing general education, not just health education. For more than 50 years, for example, the hospital has

1930

Dr. Chevalier Jackson, inventor of the bronchoscope, opens Temple's world-famous Jackson Clinic for diseases of the air and food passages.

1933

Dr. Temple Fay pioneers clinical hypothermia, the controlled lowering of body temperature to treat cancer and other conditions.

1935

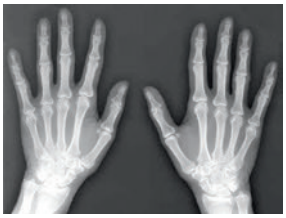
Dr. John Lansbury establishes the Lansbury Index, the first index of rheumatoid arthritis severity. Dr. Harry Bacon founds the American Board of Colon and Rectal Surgery.

1938

Drs. O. Spurgeon English, Gerald Pearson, and **Edward Weiss** open clinics for psychosomatic medicine and child psychiatry — national firsts.

1941

Dr. W. Edward Chamberlain, who invented the technology that makes X-rays visible, wins the AMA silver medal for the electrokymograph, used to detect heart disease.



Temple University Hospital, circa 1930

been introducing local low-income teens to career paths in science and medicine, giving them road maps and mentors.

The roots of Temple's Community Health Worker program (the only state-certified program in the Delaware Valley) date back to the 1960s, when Temple trained community residents to serve as family health workers. These programs extend the hospital's arm into the community to help patients stay well — and open doors to lifelong employment opportunities for health workers as well.

The starring role in education at Temple is, of course, the professional one. When Temple founded its medical school in 1901, Samaritan became its primary clinical training site — and remains so. Temple's schools of nursing and pharmacy were founded at the hospital (in 1893 and 1902). In the 1930s, the hospital launched a then-new concept in training for physicians: residencies. Today it trains 552 physicians in 39 residency and fellowship programs, along with nearly 1,000 students of the Lewis Katz School of Medicine.

Temple's embrace of education exceeds that of a traditional hospital. Its approach to health care does too. Temple was an early adopter of the "whole-person" view of health, recognizing that

1945

Dr. Waldo Nelson publishes the world-famous, still-published *Nelson Textbook of Pediatrics*.

Drs. Ernest Spiegel and Henry Wycis develop stereotactic surgery, revolutionizing brain surgery.

1947

1954

Dr. W. Wayne Babcock is awarded the AMA Distinguished Service Gold Medal for outstanding contributions to medicine and humanity.

Dr. John Lachman develops the Lachman Test for ACL instability, a clinical pearl still used today.

1956

1957

Temple's Department of Comprehensive Medicine — an early model integrating public health, prevention, and community engagement — draws visits from health leaders worldwide.

ARCHIVAL IMAGES: TEMPLE UNIVERSITY LIBRARIES
SPECIAL COLLECTIONS RESEARCH CENTER

GALLOP POLL
The horses that pulled Temple's first ambulance were donated by Peter A.B. Widener, founder of U.S. Steel. The hospital staff named the horses Pete and Widener in his honor.

health is influenced by many factors — such as income and employment status, educational level, access to food and shelter. The hospital has always been an agent for social betterment and has always worked to keep people healthy and *out* of the hospital: in the 1940s with its Institute of Public Health and Preventive Medicine, in the 1950s with its Department of Comprehensive Medicine (a program integrating public health, preventive medicine, and community engagement that drew attention from as far away as France, Brazil, and Indonesia); and in the 1960s as part of the North Philadelphia Health Services Study Group. In the 1960s and 1970s, the hospital operated two neighborhood health centers that drew about 79,000 visits per year. Today, Temple is part of the North Philadelphia Health Enterprise Zone, a collaboration to improve community welfare.

In Praise of Pioneers

The origins of Temple's contemporary world-class services date back to early Temple pioneers.

The hospital's founding medical staff included Judson Daland, MD (1860-1937), editor, *International Medical Magazine*; Edmund Holmes, MD (1851-1905), author, *Outline of Anatomy*; James White, MD (1850-1916), author, *American Text Book of Surgery*, 1896); and Charles Sajous, MD (1853-1929), founding President of the Association for the Study of the Internal Secretions (the precursor of endocrinology).

W. Wayne Babcock, MD

Temple was home to founding members of the American Board of Surgery, the American Board of Ophthalmology, the Harvey Cushing Society, the American Board of Colon and Rectal Surgery, and other prominent organizations.

For 40 years beginning in 1904, surgery at Temple was led by W. Wayne Babcock, MD (1872-1963). Babcock pioneered new surgeries (such as the "pull through" operation) and invented dozens of instruments (including Babcock's forceps). In 1904, he was

1968

Dr. Sol Sherry, soon to become world-famous for thrombolytic therapy, becomes Chair of Medicine.

1970

Cancer Research, the most frequently cited cancer research journal in the world, is founded at Temple by **Sidney Weinhouse, PhD** (edited at Temple until 1991).

1974

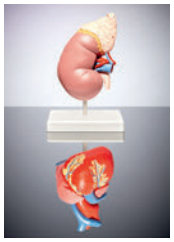
Dr. Joseph Torg and colleagues open the world's first university-based sports medicine center.

1984

Temple performs Philadelphia's first **heart transplant**. In the mid-1990s, Temple is #1 in the nation for adult heart transplants.

1987

Temple performs Philadelphia's first heart-lung transplant; and in 1990 Philadelphia's first successful **kidney-heart transplant** and Pennsylvania's first peripheral blood stem-cell transplant.



the first in the U.S. to use spinal anesthesia.

Seminal work was done at Temple in many fields.

Harry Bacon, MD (1900-1981) is considered a founding father of colon and rectal surgery.

Ernest Spiegel, MD (1895-1980) and Henry Wycis, MD (1911-1971) developed stereotactic surgery, which revolutionized brain surgery.

In 1930, Chevalier Jackson, MD (1865-1958), inventor of the bronchoscope, opened Temple's world-famous Jackson Clinic for diseases of the air and food passages.

Physical medicine and rehabilitation was born at Temple. Frank Krusen, MD (1899-1973) created the first PM&R Department at Temple in 1928.

Temple's contributions to cardiology are considerable. In 1937, Hugo Roesler, MD (1899-1961) wrote one of the earliest books on cardiovascular imaging. In 1947, the hospital opened one of the first coronary care units. In the 1980s, Sol Sherry, MD (1916-1993) revolutionized the treatment of acute myocardial infarction through thrombolytic therapy. In 1984, Temple performed Philadelphia's first heart transplant — and led the nation in adult heart transplantation in the mid-1990s.

Ground has been broken at Temple in many fields. And the quest continues.

Mission and Moxie

Temple's expertise draws regional, national, even international referrals. At the same time, Temple is the leading safety-net provider in Pennsylvania. It sustains its commitment to one of the largest at-risk populations in the nation (it provided more than $39 million in charity and under-reimbursed care in 2015 alone).

"In 1946 when Congress passed the Hill-Burton Act, requiring hospitals receiving federal funds to offer free care to those unable to pay, the law made no difference to Temple. We'd been doing it all along," says Robert Lux, Temple Health's Chief Financial Officer.

But open arms come at a cost. As the *de facto* charity care hospital in the largest city in America without a public hospital, Temple has faced significant challenges — and will continue to uphold its commitment, no matter what challenges may lie ahead.

"It is remarkable to consider the changes that have taken place in the last 125 years, and Temple University Hospital has been with Philadelphia through it all," said Congressman Dwight Evans, who represents Pennsylvania's second district. "Temple is a vital partner that is recognized and appreciated across the region and beyond."

That is our legacy of the past and our promise for the future.

The main hospital campus today.

2000

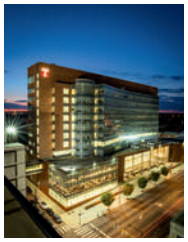
Episcopal Hospital becomes a campus of Temple University Hospital; Northeastern Hospital becomes a campus (2009); **Jeanes Hospital** joins Temple's health system (1996).

2011

Dr. Larry Kaiser becomes the new head of Temple Health; Fox Chase Cancer Center joins Temple's health system (2012).

2012

Temple faculty are first in the nation to treat esophageal disease with **cryotherapy**; excise the DNA of HIV from human cells (2014); and link pancreatic cancer with vitamin D (2015).



2014

US News & World Report ranks Temple's medical school the 4th-most applied-to in the nation. In 2016, Temple University achieves **Tier I Carnegie Classification** (top 4 percent in the nation).

2017

With 722 beds, a half-million patient visits per year, and three campuses, **Temple University Hospital** celebrates its 125th anniversary.

HEART AND LUNG: CLINT BLOWERS; BUILDINGS AND KAISER: JOSEPH V. LABOLITO; 2012 IMAGE COURTESY CSA MEDICAL, INC. (C) TRIDENT POST PRODUCTION

How Medical Students Catch THE SURGERY BUG

"DON'T BECOME A SURGEON," DR. SANJAY REDDY'S parents told him. "Choose another specialty that will enable you to work regular, predictable hours. We want you to have a life."

Did the young physician listen? No. Therefore his life is not what his mother and father (both physicians) envisioned for him.

"But I am doing what I'm supposed to be doing. I'm where I belong," says the young surgical oncologist at Fox Chase Cancer Center, clearly happy with the decision he made about his career.

Are his parents disappointed? Far from it. In fact, it's hard to imagine parents with more pride.

By GISELLE ZAYON
Illustration by BILL MAYER

DECISION PRECISION

In addition to teaching medicine, medical school has another important aim: To help each student identify the *right* medical career.

"Deciding on a specialty is a big decision," says Alisa Peet, MD, Associate Dean for Clinical Education at Temple's Lewis Katz School of Medicine. "Some students have always known what they want to do. Others are interested in many different fields and must think about what specialty will be a good fit, will make them happy and successful in their career."

Selecting the field that suits you — and you it — is essential. There has to be natural inclination, natural fit.

Surgery, for instance, isn't for everyone. Its physical demands (dexterity, steadiness, stamina, spatial reasoning ability) don't come naturally to everyone. Likewise its psychological requirements. During surgery, complications can arise fast. Decisions must be made on the spot, with calm and control. It takes a certain temperament to navigate this kind of pressure and risk.

In most areas of medicine, the effects of treatment are revealed over time — but in surgery, results are immediate. Tissue is excised, restored, rerouted. Blockages are cleared, organs transplanted, bones set.

"When the patient does well, you know you've played a significant role in that result. Likewise, if you make a mistake and harm a patient, you have to live with that, too," says Andrew Roberts, MD, Director of the Surgery Clerkship at LKSOM.

To expose students to the unique tempo and territory of each major specialty, all medical students are required to rotate through internal medicine, surgery, pediatrics, psychiatry, obstetrics/gynecology, neurology, family medicine, emergency medicine, and radiology.

These courses, which are called clerkships or rotations, teach students to apply their knowledge and skills to patient care in the clinical setting — and at the same time expose students to different options for their careers.

"The field of surgery elicits strong presuppositions," says Roberts. "Students tend to come to the surgery clerkship gung-ho — or feel it's a definite no."

One "definite no" person was Matthew Philp, MD, a 2005 graduate of LKSOM. But five minutes after scrubbing in to observe his first surgery during his clerkship, the world took on an unexpected glow. "Suddenly, it was clear; this was *it* for me," recalls Philp, who now, somewhat ironically, is Assistant Director of the Surgery Clerkship at the school.

Does he witness transformations in today's students? Absolutely. "But here's the important point," Philp says. "Newly inspired to become a surgeon or not, the surgery clerkship makes a fundamental change in all students. They leave with a far deeper appreciation, respect, and understanding of surgery than they arrived with."

"The field of surgery elicits strong presuppositions," says Roberts. "Students tend to come to surgery gung-ho — or feel it's a definite no."

In this manner, all clerkships contribute to the development of medical students as well-rounded professionals. And appreciating the various specialties isn't mere nicety. "Patient outcomes depend on how well caregivers across all the fields of medicine work together as a team," Peet notes.

During the two-month surgery clerkship, LKSOM students learn the basic principles of trauma, critical care, emergency, and general surgery. They rotate through at least two different surgical services. Throughout they are embedded in a team of senior, experienced physicians.

"You might assume the surgery clerkship teaches students how to perform surgery, but it doesn't," Roberts says. "Instead, we teach students the underlying pathophysiology of common surgical illness. We teach them how to manage patients throughout the continuum of care — before, during, and after surgery. The goal is to instill the principles foundational to excellent patient care."

The surgery clerkship's requirements are exacting. Students must work with pediatric, adult, and geriatric patients — representing 13 different commonly encountered surgical diseases — across a variety of in- and outpatient clinical settings. They must master 14 different procedures (such as how to place and remove a nasogastric tube or peripheral intravenous line). They must observe more complex procedures, such as placing a central line or an endotracheal tube. "With patient safety always the overriding concern, the level of student responsibility for each encounter or procedure is predetermined," Roberts says.

Surgery is a fast-paced, goal-directed clerkship. Students participate in the evaluation of hospitalized patients with residents in the early morning (pre-rounding), then round with the full team. They see patients in the pre-operative setting and in the OR (to observe procedures), then follow their progress postoperatively, re-evaluating their progress in the afternoon.

In addition to following about four inpatients at a time, students see outpatients, "treat" virtual patients online, and work with simulated patients (actors trained to present certain symptoms). They complete assignments that entail medical literature searches. And write papers and make presentations. They even take part in "on call."

To pass the clerkship, students take a 100-question exam on surgical diseases and treatments. They must demonstrate a spectrum of clinical competencies. They must exhibit good clinical decision-making. And show they can utilize hospital and community resources cost-effectively.

Evaluations go beyond technical knowledge. Is this student well-organized? Committed to personal learning and improvement? Advocating for patients in a constructive manner?

"It's all about professionalism. We teach students how to interact with patients, families, and colleagues in ways that build trust and rapport. To be nonjudgmental when addressing sensitive issues. To learn how to deliver bad news. These are core elements of all clerkships," says Peet.

EDWARD CUNICELLI

Left: Sanjay Reddy, MD. Above: Reddy in surgery.

GETTING REDDY

Temple students long-set on surgery, along with those who catch the surgery bug during medical school (like Philps), have another chance to delve into surgery during fourth-year elective clerkships, which enable students to explore additional areas of interest.

Those interested in learning about surgical oncology spend a month at Fox Chase Cancer Center. Some are assigned to Sanjay Reddy, MD, who specializes in the surgical treatment of colorectal cancer, pancreatic cancer, and melanoma and sarcomas. Students love him because *he's* in love with every aspect of his career: patient care, teaching, and research.

Reddy completed his general surgery residency at Beth Israel Medical Center in New York City (under the tutelage of his father). His mother, an anesthesiologist, also spent long hours in the OR; that's why the Reddys hoped their son would choose something less demanding. But he was born, it seems, with the surgery bug. In fact, he wanted to be a cancer surgeon, like his dad. Therefore, after residency, he came to Fox Chase in 2012 for a two-year fellowship in surgical oncology.

Afterward he was invited to join the faculty. His faculty mentors are now his colleagues, part of his extended medical family.

"Our team has amazing expertise," Reddy says. "We put our heads together, look at all factors of each patient's case to work out what therapies will be best, in what order, at what interval. Collaborating, we exercise extremely nuanced judgment."

It's one of the great lessons of medical school: The team-is-supreme.

Dennis Vaysburg, a third-year LKSOM medical student, is a Reddy fan — and ready to join his team. After shadowing a surgeon at Case Western Reserve as an undergraduate, Vaysburg set his sights on becoming a surgeon. Now, having spent part of his clerkship with Reddy, he is smitten with surgical oncology — a field he never considered before.

"A general surgeon who does emergency appendectomies will probably never see those patients again, but at Fox Chase, surgical oncologists develop long-term relationships with patients, get to see how their lives are progressing. That really appeals to me," Vaysburg says.

Reddy makes a big impression on students with the questions he asks, the observations he makes. "He turns so many moments into opportunities to teach. He even asks students for feedback so he can do an even better job with future students," Vaysburg says.

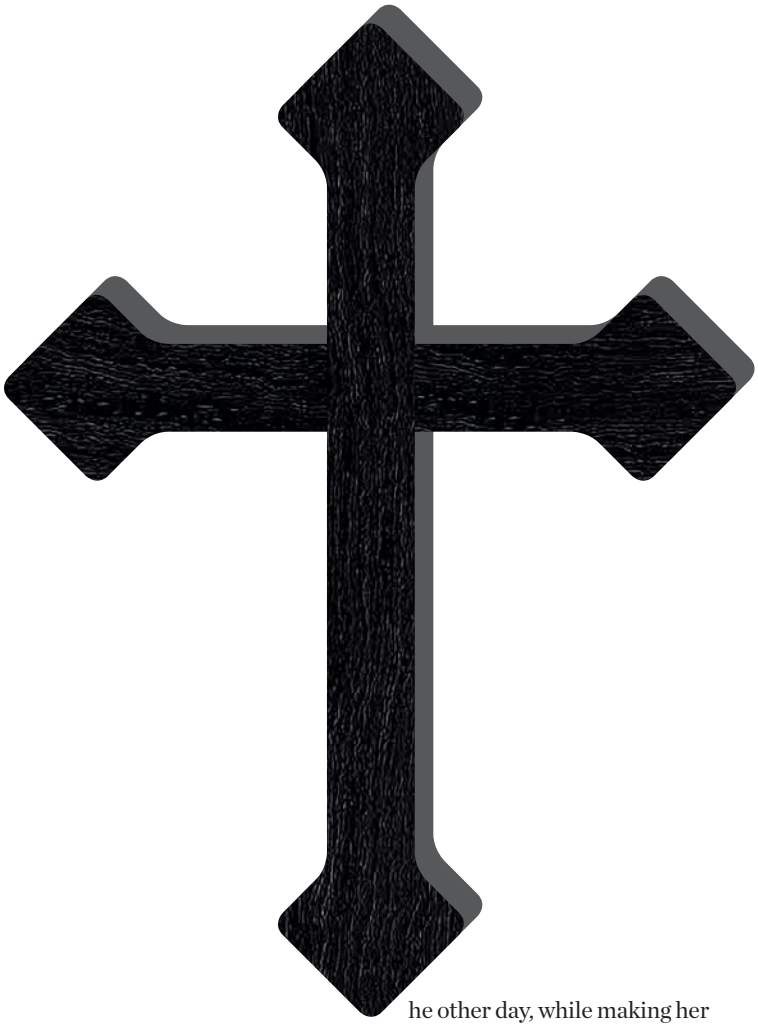
"Medical students learn that you are not pigeon-holed as a surgeon. You can specialize in cancer surgery, trauma surgery, vascular surgery, transplant surgery, thoracic surgery. It's quite a versatile specialty," says Reddy. "As my colleague Dr. Jeffrey Farma says, 'There is not one day that is routine.' We learn something new about patients, life, and cancer on a daily basis."

"Everything we do is about education," Reddy continues. "Education is about expanding, refining, improving, discovering, and most of all, sharing our knowledge and passion. Clearly, it can be contagious! "

For an appointment with a Temple physician, call 1-800-TEMPLEMED.

Habit *of the* Heart

Practicing Medicine with Faith



The other day, while making her rounds at Temple University Hospital, Jocelyn Edathil, MD, went to see a patient, Mrs. Geneva Meade.

Meade, 69, an amputee with myriad health problems, most recently a blood clot in her lung, was reading a book, *Power Prayers for Women*. Meade, it turned out, had been an evangelist for decades.

Beneath her white medical coat, Edathil, 37, a hospitalist, wears the white habit of a Catholic nun.

In addition to saving lives, Edathil is devoted to saving souls. If she feels a patient would be receptive to prayer — usually the terminally ill, the

By MICHAEL VITEZ
Photography by EDWARD CUNICELLI

Sister Jocelyn Edithil, MD

addicts, the lonely, and the lost, or those, like Meade, who are open about their faith — she will ask if she can pray with them. With Meade, it was a little different.

"I'm a new sister," Edathil explained to Meade. "I just took my vows in August. Usually when I pray with patients, I pray for them, but since you have experience, I would be so grateful if you would pray for me."

"I'd be honored to pray for you, honey."

The two women held hands.

"Pray for my sister, God. I'm asking you to touch her. Keep your angels around her, God. She surrendered her life to you."

After the prayer, a solid five minutes, Edathil was beaming. And her eyes were moist.

"Oh, my God. Thank you so much," Edathil said.

"Anytime," said Meade.

SISTER DOCTOR

She introduces herself to patients as Dr. Edathil. To her fellow physicians, she is comfortable just being Jocelyn. Outside the hospital, she is Sister Jocelyn — "My most important title," she says.

She feels fortunate that her service to God includes a profession she loves deeply. "It is a great joy for me after all these years of training to do both," she says.

She keeps a rosary in each pocket of her white coat, and tries to attend Mass every morning before work. One day recently, she missed, but was working at Temple's Episcopal Hospital campus, where a Catholic church is next door. She ducked out in late afternoon when she had a moment to receive the Eucharist. She kneeled and prayed, her stethoscope sticking out of her coat pocket, a moment of sublime peace. She was radiant as she crossed the parking lot back to the hospital. "It's heaven," she said.

She went to see a patient, Joseph Rios, 24, a heroin addict who, in a rush to escape the police, accidentally injected himself in the hand, which got infected and swelled like a boxing glove. He was getting antibiotics.

Edathil asked him about his life, his addiction. He said he'd tried to get into a rehab program but lacked coverage. "I'll pray for your insurance to open a door," she told him. She tried to get him to imagine a different life, off drugs, working, and told him he should consider becoming a phlebotomist. "I've met quite a few addicts who can find a vein anywhere," she told him. He then told her with pride, "People pay me to find their neck veins."

She returned that evening to pray with him. She asked him to promise that he would see her in the morning, and work with her on getting clean.

She introduces herself to patients as Dr. Edathil. To her fellow physicians, she is comfortable just being Jocelyn. Outside the hospital, she is Sister Jocelyn — "My most important title," she says.

He kept his promise, at least the first part. He saw her at 7:30 a.m. but then left the hospital against medical advice. This is common among addicts. The hunger for heroin is too great.

"I am disappointed," said Edathil. "But I must be faithful, not necessarily successful."

She calls herself a "baby nun," new to the religious life, and observing her vows isn't always easy. With a vow of poverty, even buying Starbucks is considered an extravagance. She is paid a hospital salary, but gives it to her Order.

For Edathil, science and faith have long gone hand in hand. Edathil's parents emigrated to the United States in the 1970s from Southern India. She was born at Temple University Hospital and raised in Philadelphia. Her mother, now retired, was a Respiratory Intensive Care Unit nurse at Temple for 25 years. The family belongs to the Malankara Catholic Church, popular in Southern India.

When Edathil was 13, she was at a church service with a charismatic preacher. "God, if you're for real, show me," she said. The preacher declared that 20 people in the crowd would feel a bolt of electricity and stand up. "I felt electricity all through my body," Edathil recalled. "I stood up. I'm very scientific. I counted out 19 others."

She went on to Central High School, and Villanova University on full scholarship, and as her tithe devoted 10 percent of her time to the campus ministry. She decided to become a nun at the end of her senior year, but by then was already accepted into a graduate program in chemistry at the University of Pennsylvania, and an MD/PhD program at Penn State. She went on to do her residency in internal medicine at Temple.

"I saw learning about the human body as a type of spiritual exercise," she said. She loves the diagnostic challenge of figuring out what's wrong with patients. "Every day is a mystery," she says. She also loves teaching. This was evident during rounds.

"The patient has a MRSA pneumonia," she quizzed an intern, Lauren Monaco, outside a patient's room. "I'm going to give daptomycin. You say 'OK' or you say 'no'?"

"I'm going to say no," said the intern.

"Okay, I like it," said Edathil. "Do you know why?"

"Poor lung penetration?"

"There's something that actually inactivates the daptomycin," the doctor continued. "Do you know what that is?"

Pause.

Edathil continued. "It's what premature babies don't produce enough of...."

"Surfactant," said the intern. Yes.

"I was actually surprised at how much Dr. Edathil was like other attendings," said one resident. "She asks hard questions and expects a lot. Don't let the habit fool you. When she's in the hospital, she is first and foremost a doctor."

Absorbed in prayer.

NUN "RESIDENCY"

In the summer of 2013, Temple was revamping its hospitalist program — hospitalists are physicians who work exclusively in hospitals taking care of patients — and Edathil applied. But she explained to John Davidyock, MD, Chief of the Hospital Medicine section, that she would be leaving in a few months to begin her religious training as a nun.

"I didn't hesitate," he said. He thought her decision to become a nun only underscored her commitment to patients.

Edathil worked two months at Temple, then left to complete her novitiate, what she calls her "nun residency." For over a year she spoke only to 12 other nuns in training.

She wears the habit and veil because it is required by her religious order. She was worried at first that this might cause problems. "So far, thank God, it hasn't. The patients are absolutely accepting. Some are thrilled," she said.

Often when walking the halls, patients and their families will give her an Arabic greeting, "Assalam Alaikum" (may God grant you protection and security). She will respond in kind, "Alaikum Assalam."

"I have no problem blessing in Arabic," she explains.

She went in the other day to see Terry Jenkins, 54. He missed three weeks of kidney dialysis, high on marijuana. Near death, his cousin brought him to Temple, where two cycles of dialysis brought him back.

Jenkins is Muslim and assumed Edathil was too. "I thought it was a Khimar," a form of Muslim head covering, he said of her veil.

It had become clear to her that he used marijuana as a panacea for all his problems. He probably had a lot more pain than he let on. She tried to probe, to learn more about him, to find a way to help him, but had little success.

"I just love the weed too much," he said.

"I know," she said. "But I don't want you to be using so much weed that you're not going to dialysis."

She prayed for him later when she did her rosary.

Edathil has so many people to pray for, she uses an app on her phone to keep track. She swipes through screen after screen, making sure everybody's covered. There's even a green check mark for prayers that are answered.

"I asked her to pray for my mother-in-law who is Presbyterian and had a total knee replacement," said Rachel Rubin, MD, a fellow Temple hospitalist. That prayer got a green check.

"She's a wonderful physician," says Rubin, who is Jewish. "She is caring and patient and thoughtful, and keeps the patients' best interest at heart. Her belief is to love everyone, all her patients and colleagues. This is a testament to the diversity of Temple. No one really bats an eye. Everyone is very accepting."

Edathil went to see a cardiac patient who was about to be discharged to a nursing home. She wasn't strong enough yet to go home. She worried that the nursing home her husband picked was too far away. Edathil asked if she could pray with the woman as a voice on the television blared: "Is the man I love cheating on me with my twin sister?" Patient and doctor were oblivious, absorbed in prayer.

"Lord, as she is about to leave this hospital, prepare a place that she's happy with, that her husband's happy with. Thank you, Lord."

Then Edathil was on to see her next patient.

Michael Vitez, winner of the Putlizer Prize in journalism, directs the Narrative Medicine Program at the Lewis Katz School of Medicine.

For an appointment with a Temple physician, call 1-800-TEMPLEMED.

Bennett Lorber, MD, MACP

THOMAS M. DURANT PROFESSOR OF MEDICINE
PROFESSOR, MICROBIOLOGY AND IMMUNOLOGY

Q & A

You say you are a physician and a painter. Not a physician who happens to paint, or a painter who happens to be a physician. Are these distinctions you unwaveringly maintain?

For me, painting is not a hobby; rather, it is a calling equal to my calling to be a physician. I cannot imagine my life without either medicine or painting. We all have many identities — mine include father, husband, teacher, colleague, and friend. The way we define ourselves can enlarge our lives and our possibilities, framing our expectations of others, ourselves, and the world. It's something I strive to impart to my students.

Q: *You believe that art has helped you learn to solve diagnostic challenges. Can you explain?*
A: I have developed my powers of observation through painting and analyzing art. Artistic concentration tunes the senses to nuance and detail in all settings, including clinical ones. For example: I was asked to see a patient with a pneumonia that would not abate. A number of physicians had already seen him. When I visited him in his room, I noticed a magazine on the bedside table about tropical birds. It turns out he raised parrots. He had psittacosis, an uncommon pneumonia acquired from parrots. The magazine had been there all along. I was just the first to take note.

Q: *In 1996 you wrote an article called "Are all diseases infectious?"* (Annals of Internal Medicine) *that caught the attention of such luminaries as Anthony Fauci of the NIH. You were the first to note that "the media have largely ignored...the discovery that transmissible agents play important roles in diseases not suspected of being infectious."*
A: So-called emerging diseases like Ebola have been the subject of books, movies, and television shows for decades, yet little attention has been paid — until recently — to the roles that transmissible agents play in diseases once *not* suspected of being infectious — such as gastric ulcer disease, neurodegenerative disease, inflammatory disease, and cancer. Since this scientific revolution began in the 1970s, we continue to identify more "infectious" causes for diseases formerly thought of as nontransmissible. In some cases, pathogens are causal; in others, they trigger an immune reaction that leads to disease or functions as a risk factor. Host-pathogen interactions are opening new prospects for prevention and treatment.

Q: *In "Hot tubs, sex, sushi, and infectious diseases"* (Pharmacotherapy, 1991) *you wrote about striking and interesting changes in patterns of diseases due to alterations in lifestyle.*
A: As social patterns change, we recognize new diseases, new clinical manifestations of old diseases, new ecologic niches for traditional pathogens, and new modes of disease transmission. Even fashion plays a part. In the 1980s, the considerable uptick in cases of osteomyelitis of the small bones of the foot was due to the propensity of pseudomonads to thrive in the moist inner layers of the preferred footwear of the day: *sneakers*.

Q: *You've presented the infectious diseases update at the annual meeting of American College of Physicians four times; contributed to every edition of* Principles and Practice of Infectious Diseases*; won two lifetime achievement awards, including the one from the Infectious Diseases Society of America; and hold rare Master status in the American College of Physicians. What means the most?*
A: Teaching. A student I had 25 years ago recently told me: "You remain to me a model of how to honor the profession of medicine." That touches me. Former students regularly call me for advice, still think of me as their professor. That touches me, too.

When I was an undergraduate, I gave a presentation to my invertebrate zoology class. Afterward the professor said, "Bennett, I hope whatever you do will include teaching." I hadn't considered teaching before, but a verdant world opened to me with that single remark.

Photograph by COLIN LENTON

Bennett Lorber, MD, MACP

Urban Clinical Research

Across the nation, in low-income, mixed-minority urban communities like North Philadelphia, it's an uphill battle against diabetes, stroke, hypertension, and heart disease — for the residents themselves and the clinicians and scientists who want to help them. "Entrenched patterns of illness can be changed only with proven interventions," says **Susan Fisher, PhD**, Associate Dean of Clinical Research at the Lewis Katz School of Medicine. "Interventions based on clinical studies that are scientifically sound, bias-free, and demographically relevant."

Health care is not plug-and-play. An approach that works for one type of community may not for another. When it comes to low-income, mixed-minority patients in the inner city, there's simply not a lot of background research to rely on, Fisher says. The population isn't well-represented in published clinical studies. Which is precisely where the Temple Clinical Research Institute (TCRI) comes in. It is directed by Fisher — an epidemiologist with expertise in biostatistics and clinical trial design.

Eager to see medicine do more for what she calls "our most vulnerable communities," Fisher leads TCRI with a focus on helping Temple faculty get more studies in the pipeline that will ultimately benefit people in low-income urban areas. The in-house consultancy features staff to guide the clinical research process every (complicated) step along the way. It even features a special program to boost minority participation, Temple Health: Block by Block. This program was designed to help Temple better understand and address the health concerns of North Philadelphians; increase community awareness of, and trust in, the clinical research process; and establish a sustainable, multi-generational cohort of area households engaged in the concept of individual and community health improvement across the lifecycle.

Block by Block representatives go door-to-door in North Philadelphia to interview people about their health. "When we explain how participating in Temple's research efforts will help improve health in North Philadelphia, we find that people want to be involved," Fisher says. "More than 1,200 residents have enrolled since we launched the program in 2015 — significantly more than we anticipated. By sitting down with people in their homes, we're building confidence in Temple and in our research."

Block by Block representatives visit enrollees every six months to gather health-related information that Temple can then use to fine-tune its research approach. "Home visits also give us a chance to inform residents about studies enrolling participants," Fisher says, calling Block by Block a community engagement tool that also serves as a research partnership between the medical school and its community.

"Having our beneficiaries invested and involved goes a long way to making a positive impact on urban health. Temple provides the best medical care possible to patients in our trials. Minorities need to be a part of that," says Fisher. "Most importantly, we are giving North Philadelphians a voice in research. Their concerns and insights can send scientists in new directions."

Urban health experts like Fisher know that a variety of social determinants work against people living in low-income, minority urban communities. This population has historically been excluded from clinical studies on which health improvement strategies are built.

To support Temple's innovations in urban medicine, Fisher also serves as founding Chair of the Department of Clinical Sciences, which teaches future clinical researchers best practices in clinical research. With curricula that cover research methodologies, risk assessment, data management, biostatistical analysis, regulatory compliance (and more), the department is also valued by mid-career investigators seeking to hone their skills.

"Optimal scientific productivity guided by an ethical, patient-centered approach — that's our goal," Fisher says. "By enhancing Temple's overall institutional proficiency in clinical research, we're working to decrease the human cost of disease in diverse, underserved communities. Temple University is a nationally-recognized research institution committed to urban health improvement. I'm excited to be part of it."

Photograph by CARDONI

Susan Fisher, PhD

News for NET

A neuroendocrine tumor (NET) is a cancer that grows in endocrine and nervous-system cells — such as those in the digestive tract, pancreas, lung, or glands. About 8,000 Americans are diagnosed with a malignant NET every year. Because NET symptoms can mimic those of other diseases — and because routine imaging tests cannot optimally detect NETs — the cancer is often diagnosed at an advanced stage, making it challenging to treat.

"But something new has come along — enabling cancer specialists to assess, monitor, and treat patients with NETs with far greater precision than ever before," says Rosaleen Parsons, MD, FACR, FSAR, Chair of Diagnostic Imaging at Fox Chase Cancer Center.

It's an innovative imaging technique called Gallium-68 DOTATATE PET/CT. Fox Chase Cancer Center is the first hospital in the greater Philadelphia region to offer it. "In fact, Fox Chase is pursuing designation as a neuroendocrine center of excellence," says Paul Engstrom, MD, FACP, Special Assistant to the President of Fox Chase, who is leading the initiative with Namrata Vijayvergia, MD, Assistant Professor of Hematology/Oncology.

Two imaging techniques used in tandem undergird the new technique: positron emission tomography (PET) and computed tomography (CT). PET captures images of bodily function. CT produces images of body structure. Both techniques capture pictures of the body "slice by slice" in three dimensions. Hundreds of images are produced during a session. Physicians can examine one slice at a time or in stacks to assess the affected anatomy and physiology.

"A PET scan is actually a picture of a positron, a subatomic particle with a positive charge," says Jian (Michael) Yu, MD, FRCPC, Chief of Nuclear Medicine and PET at Fox Chase. The signals that produce the images on a PET scan are obtained by means of a radioactive drug, a tracer. Tracers are injected, swallowed or inhaled, depending on what body part is being studied. PET scans depict the body metabolizing the tracer, breaking it down.

A new FDA-approved tracer called Gallium-68 DOTATATE, used in

IMAGE A: The old method, an octreotide PET scan

GOOD-BYE TO A SHADOWY PAST. Image A (above), was produced with the old method for detecting neuroendocrine cancer, a PET scan with an octreotide tracer. Image D (far right) depicts the much-improved new method, which reveals tumors in far greater detail, a boon for diagnosis and treatment. Image D was produced by co-registering two images: A CT scan (Image B) and a PET scan (Image C) performed with a newly approved tracer, Gallium-68 DOTATATE.

ED GABEL

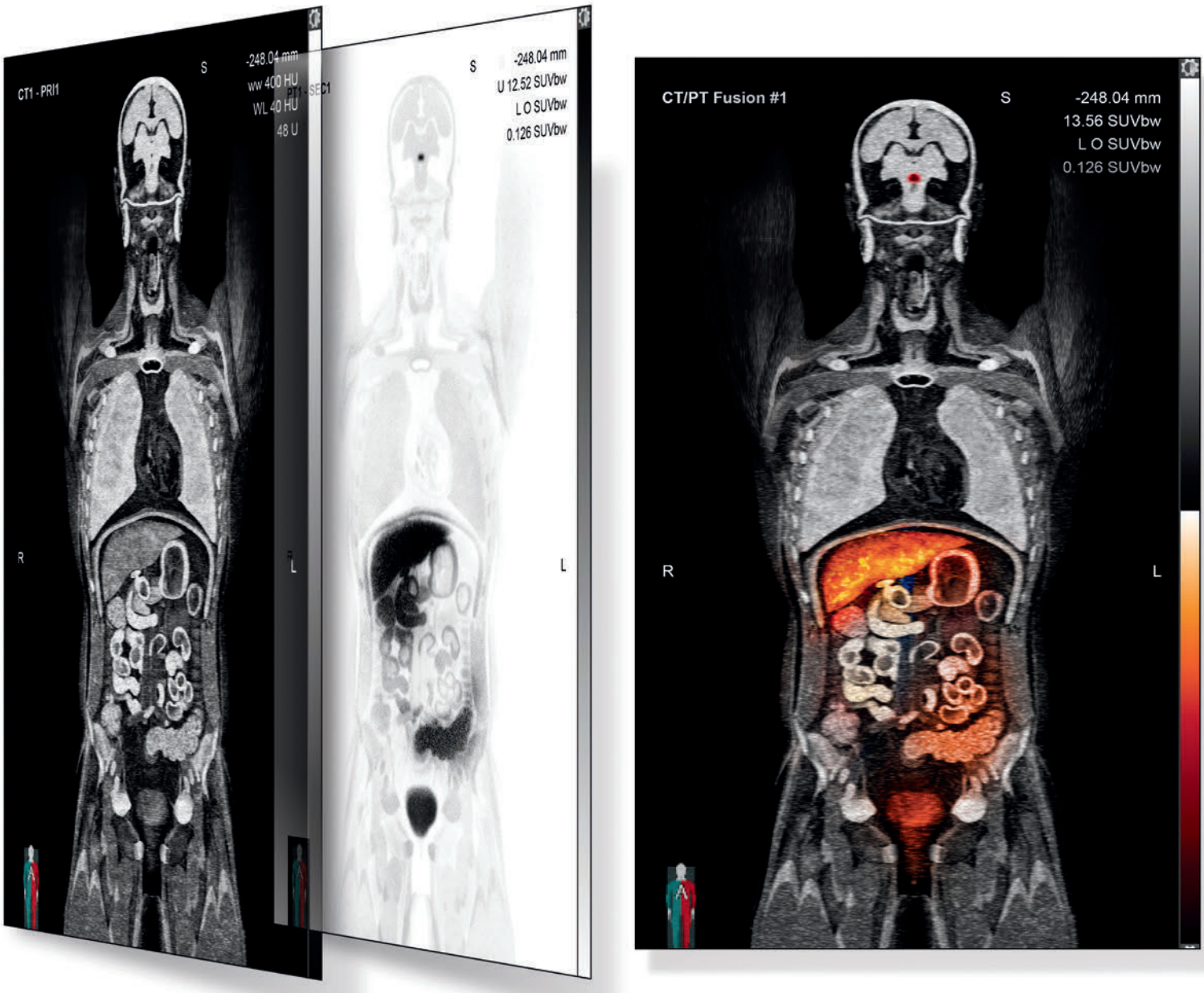


IMAGE B: A CT scan + **IMAGE C:** A PET scan created with Gallium-68 = **IMAGE D:** The Gallium-68 DOTATATE PET/CT, a clearly superior imaging result.

tandem with PET and CT, is the breakthrough for NET imaging at Fox Chase.

Gallium-68 DOTATATE reveals metabolic information about a specific cellular receptor for a hormone called somatostatin. "NETs usually have a higher concentration of somatostatin receptors than normal tissue," explains Yu. "Therefore, tissues with normal metabolic function appear as 'background activity' in the scan, while cancerous tissue — which contains more somatostatin receptors — shows up in higher densities, revealing areas where the cancer has originated and/or spread."

The new Gallium PET/CT scan is proving enormously helpful for diagnosing NETs, for staging and grading tumors, and for making decisions about treatment. "We are also using the scan to monitor patient response to treatment," Vijayvergia says, noting that treatment decisions are based, in part, on imaging results.

As an added bonus, the new scan takes much less time than older methods. The old method required a series of scans over three days. Today, three hours of scanning produces far better results. In addition, patients are exposed to approximately two-thirds less radiation than with the old method.

According to Vijayvergia, the Gallium PET/CT scan is significantly improving Fox Chase's ability to care for patients with NET. "It will change the course of treatment for many patients with neuroendocrine cancer," she says.

VISION QUEST

The American Board of Ophthalmology — the organization that sets the standards for the certification of ophthalmologists — was established in 1916. It was the first specialty board in the nation. One of its three founding members, Wendell Reber, MD, was Chair of Ophthalmology at Temple.

The world's first reference text on pediatric ophthalmology was written at Temple by a former department chair, Robison Harley, MD, PhD.

The Chan wrist rest — a stabilizing device used by eye surgeons around the world — was invented at Temple by former chair Guy Chan, MD.

The first ophthalmic surgery in Philadelphia performed with an operating microscope was performed at Temple. Some of the first photos of the ocular fundus were taken at Temple, too.

"I've led Temple Ophthalmology for nearly ten years now," says Jeffrey Henderer, MD, the Bedrossian Chair of Ophthalmology, "but I'm still amazed by the groundbreaking advances that were achieved here."

"Temple Ophthalmology was early to recognize the impact of diabetes, hypertension, arteriosclerosis, and other systemic diseases on the retina," Henderer says. "In fact, in 1940, our exhibit on the topic won first prize from the American Medical Association."

"High standards are our hallmark," says Henderer, a fellowship-trained glaucoma specialist. "Temple's residency program is now in its 81st year. The physicians we've trained work all over the country."

With three full-service offices in the Philadelphia region, the department conducts research, manages a telemedicine program, and provides a comprehensive spectrum of services to manage ophthalmic disease, infections, and eye trauma.

1892

Temple's founding medical staff of seven includes **G. Oram Ring, MD (1861-1933)**, a general practitioner and ophthalmologist who later chairs the College of Physicians of Philadelphia's Section of Ophthalmology.

RING

1906

Temple's first Chair of Ophthalmology is **Wendell Reber, MD, FACS (1867-1916)**, coauthor, *Muscular Anomalies of the Eye* (1898). He is elected President, American Academy of Ophthalmology and Otolaryngology in 1910, and becomes a founder of the American Board of Ophthalmology in 1916.

REBER

1917

After Reber's premature death, Drs. Luther Peter and Winfield Boehringer lead Temple's eye service. In 1928, pioneering ophthalmic plastic surgeon **Edmund Spaeth, MD (1890-1976)**, joins the faculty. Spaeth later becomes a founding member of the American Board of Plastic Surgery.

SPAETH

1933

Mayo Clinic neuro-ophthalmologist **Walter Lillie, MD (1891-1947)**, becomes Chair. He establishes Temple's ophthalmology residency program (1935) and recruits Drs. Edward Bedrossian and Glen Gibson to Temple.

LILLIE

1892

FACULTY

1934

Temple faculty are among the first in the nation to take clinical-quality photos of the **ocular fundus**, a method still used to examine the retina and other structures. A multi-armed ophthalmoscope enables nine people to observe a single patient at once.

1947

After Lillie's untimely death, **Glen Gibson, MD (1906-1984)**, is named Chair. The department now has 15 faculty.

1966

Temple Ophthalmology merges with Wills Eye Hospital. **Arthur Keeney, MD, DSc (1891-1996)**, heads the combined program until 1973.

1974

Robison Harley, MD, PhD, FACS (1911-2007), is now Chair. *Harley's Pediatric Ophthalmology* is the world's first reference on the topic (1975). Harley is named President of the American Association for Pediatric Ophthalmology and Strabismus in 1977.

1978

Guy H. Chan, MD, FACS (1928-2009), is Chair. Chan brings the first operating room microscope to Philadelphia (1973); invents the Chan wrist rest (1973); and with Steven Wong, MD, develops prism scanning for patients with low vision (1982).

2008

Jeffrey Henderer, MD, joins Temple as the Dr. Edward Hagop Bedrossian Chair of Ophthalmology, endowed in honor of an early faculty member. In 2015 he is named Secretary of Curriculum Development of the American Academy of Ophthalmology.

GIBSON

KEENEY

HARLEY

CHAN

HENDERER

SPAETH AND KEENEY, COURTESY WILL'S EYE HOSPITAL; ALL OTHERS: MEDICAL SCHOOL ARCHIVAL MATERIAL

Stories of the Human Side of Medicine

"THE FACTS ARE WELL-REPORTED: the compassion that motivates many people to enter medicine can erode over time," says Michael Vitez, the Pulitzer Prize-winning author and Director of Temple University's Narrative Medicine Program. "Narrative Medicine's goal is to nurture and protect compassion by teaching storytelling skills that focus on the human side of medicine. Along with the physician's touch, stories are at the core of the patient-physician relationship. Stories have the power to heal, inspire, build relationships, and change the world," says Vitez. As these excerpts written by medical students at the Lewis Katz School of Medicine make clear, they also chronicle an amazing inner world.

The Mulberry

In the beginning you were nothing but sound, a sound heard by none, not even you. You started in violence. You started in blood. In the sibylline darkness of your mother's womb came, slowly, a rumbling thunder — and suddenly, high and bright, the mighty clash of your two halves. Then — the furious boiling of cells, the roiling of atoms, the mad, drunk dance of molecules — until finally, life, dogged, deliberate, unfolded, limbs burgeoned, lungs blossomed, and you, my dear, unfurled.

What can I tell them, these curious people in their white coats? What can I tell them about your life? Shall I tell them you're a Libra and not known to make quick decisions? Shall I tell them you only took cold showers and couldn't carry a tune? Shall I tell them you were always too scared to uncork champagne and walked too slowly to get anywhere on time? Shall I tell them about our sons, or about the picture on the wall of our room of a baobab that you'd always wanted to see, but then we never did? Shall I tell them about the color of your eyes or that you peeled oranges so they unfolded like a flower?

Shall I tell them about the end? How it wasn't loud, and it wasn't mighty. How you didn't leave in violence. You left in a hurry. Without saying good-bye. No last rattling breath, no drowning gurgling lungs, no farewell twitch of a finger. Nothing spectacular. Nothing to see. Just silence blooming. How seemly. How unsuitable.

So here I am now, at the kitchen table, eating the berries you bought last week. Staring at the ring on the wood you couldn't get out, no matter how hard you scrubbed. The berries burst in my mouth, a flash of tartness, a lingering sweetness. I swallow. And then nothing, just the taste of my own tongue. You were always so good at packing for trips, making lists, and then lists of lists. But this time you left behind a few things. The shape of your hands in the air pouring tea, for example. A shaft of crumpled sunlight on an empty bed. And a whisper, nothing more than a stirring of the curtains, the faint echo of the sound you once made, high and bright, when your life first burst into time.

— EMILIE ANGELE DECOPPET
Class of 2020

Never the Heart

Adding the word "congestive" to "heart failure" makes it sound more benign than it actually is. Like you have the congestion associated with a cold, as though the solution lies in how many boxes of tissues you can hoard and not in the tiring of that faithful one-pound pump, tolling your every minute for 88 long years.

Illustration by BRIAN CRONIN

But in truth, it is the congestion that kills you. Your heart is flagging, lagging, trudging, the blood sitting heavy in your lungs. Fluid leaks across to where breath is meant to be. Until they are lungs full of you. You drown in yourself.

Like the heart of feelings, the heart of the body gets bigger the harder it works over time. After so much love, it's a red, angry knot of muscle, struggling to keep time you no longer have. But like a bird fluttering in the pericardial sac, like a fish in the net open-mouthed as it chokes on air, the heart gets no help. The ribs, suddenly disobedient, are supposed to rise. They are the failure, not the heart, never the heart.

— JENNIFER ALLEN-FUJITA
Class of 2020

Closing the Loop

I am on duty in the Emergency Department, sewing up a kid's lacerated hand. He is ten years old and terrified. As I calm and cajole him, I have the strangest sense of déjà vu. I have been here myself — a young boy in my own kitchen with a torn-up hand. The doctor is my father, coaxing me, just like I am doing now. I feel the burn of the lidocaine, the numbness setting in, my father's deft weaving of knots. Now here I am sewing the same knots, singing the same song, soon to be a doctor myself. My patient is calm now. As I sew, I feel the pinch and the pull in my own hand. I hear my father's voice in my head. My grandfather's voice, too, also a surgeon. My patient watches me with trustful eyes as I draw the suture, ensuring the loop of each circle is firmly closed, lending the wound a little more strength before my needle travels on.

— MATTHEW TRIFAN
Class of 2017

More than Sum or Sin

It starts with white. A white body bag over my eyes. A white ceiling above me, sharing my blank expression. White sleeves of lab coats. White strings tied around me, holding my dissected body together. The white of the cheese cloth wrapped around my face, stained with bodily fluids and the red-brown clay of my own dried blood.

Students will soon be standing over me again, scalpels, scissors, and forceps in hand, ready to start their daily work. Over these past weeks, they have become more intimate with me than anyone I have ever known. They have dug into recesses that no one could imagine, followed blood vessels and nerves to the furthest points of my body, found parts of me that even I never knew existed. They have palpated and touched and poked and prodded, gaining knowledge. But still have no idea who I am. They will never know me, never come close.

I could have been a great lover, a wonderful spouse, a good dad, a terrible son, an alcoholic, a five-time divorcé who still believes in love at first sight, a great high school athlete, a *Star Trek* fan, someone more than the sum of my anatomical parts, someone more than the sins they find inside my body.

— WESLEY SCHETTLER
Class of 2020

IMPACT

1960s

Washington Hill, MD '65, FACOG, Sarasota, FL, Chair of Obstetrics/Gynecology and Director of Maternal-Fetal Medicine at Sarasota Memorial Hospital, was recently named one of the "Top 100 Black Physicians in the Country" by *Black Enterprise* magazine. Hill is also Clinical Professor of Obstetrics and Gynecology at the University of South Florida.

David Leber, MD '67, Mechanicsburg, PA, has retired after a 37-year career in plastic and reconstructive surgery with the Lancaster Cleft Palate Clinic. Over the years, he has traveled with the World Surgical Foundation on missions to Ecuador, Thailand, Nepal, and many other countries to serve patients in need.

1970s

Arnold Bayer, MD '70, Rancho Palos Verdes, CA, has received the Outstanding Senior Research Investigator Award of the Geffen School of Medicine's Biomedical Research Institute (UCLA). The award recognizes 20-plus continuous years of NIH funding for Bayer, a Distinguished Professor of Medicine.

Michael Emmett, MD '71, MACP, Dallas, TX, Chief of Internal Medicine and Director of the Nephrology Laboratory at Baylor University School of Medicine, recently served as the National Kidney Foundation's Shaul G. Massry Distinguished Lecturer.

Stephen Ludwig, MD '71, Haverford, PA, Senior Advisor for Medical Education at Children's Hospital of Philadelphia (CHOP) and Emeritus Professor of Pediatrics and Emergency Medicine at the Perelman School of Medicine (University of Pennsylvania), was the recipient of CHOP's 2016 Richard D. Wood Distinguished Alumni Award. Ludwig is a member of the Institute of Medicine and a former president of the Academic Pediatric Association.

John Pagana, MD '72, Sunbury, PA, now retired after a 30-year career in family practice, received the 2016 Adam Smith Award for Distinguished Leadership for his service to EconomicsPennsylvania, which promotes economic and financial literacy in K-12 education.

Charles Cutler, MD '74, MACP, Merion Station, PA, is President of the Pennsylvania Medical Society, a 16,000-member organization. An internist who practices with the Einstein Healthcare Network, Cutler has been active with the Society — and with other organizations promoting better health for Pennsylvanians and the nation — for 35 years. He is a former Chair of the Board of Regents of the American College of Physicians.

Sandra Harmon-Weiss, MD '74, FAAP, Cape May, NJ, has been elected to Temple University's Board of Trustees. A nationally known expert in Medicare, Medicaid, and uninsured populations, Harmon-Weiss is a former executive of both U.S. Healthcare and Aetna, and has provided counsel to the NIH and the Institute of Medicine. Harmon-Weiss was the recipient of LKSOM's Henry P. Laughlin Alumnus of the Year Award in 2015, its Alumni Service Award in 2009, and was inducted into the University's Gallery of Success in 2004. She is the Chair of the Lewis Katz School of Medicine Board of Visitors.

Bernard Remakus, MD '78, Hallstead, PA, recently published his seventh book, *The Lame Duck* (221 East Publishing), a medical suspense novel that received five-star reviews from the *San Francisco* and *Manhattan Book Reviews*. Remakus has been the sole practicing physician in Great Bend Township, PA, for 36 years. His three children, Chris, Ali, and Matt, also earned their medical degrees from Temple University.

HILL: COURTESY UNIV. SOUTH FLORIDA; LEBER: COURTESY DR. LEBER; EMMETT: COURTESY BAYLOR SCOTT & WHITE HEALTH; LUDWIG: COURTESY CHILDREN'S HOSPITAL OF PHILADELPHIA; CUTLER: COURTESY PENNSYLVANIA MEDICAL SOCIETY; HARMON-WEISS: JOSEPH V. LABOLITO

Joyce E. Myers, MD '79, Cambridge, MA, is Vice President of Clinical Development at Cognoptix, Inc., a diagnostics-development company focused on Alzheimer's disease. She has held leadership positions at Boehringer Ingelheim and Janssen Pharmaceuticals.

1980s

Melodee Lasky, MD '80, Annandale, NJ, a family physician, is Assistant Vice Chancellor for Health and Wellness at Rutgers University of the State University of New Jersey.

Gerald Williams, Jr., MD '84, Villanova, PA, is President of the American Academy of Orthopaedic Surgeons, which represents 39,000 orthopaedic surgeons nationally. The John M. Fenlin, Jr., MD, Professor of Shoulder and Elbow Surgery at the Sidney Kimmel Medical College at Thomas Jefferson University and a Rothman Institute physician, Williams is a past president of both the Mid-Atlantic Shoulder and Elbow Society and the Pennsylvania Orthopaedic Society.

James Fingleton, MD '85, FACS, Barrington, RI, is Chief of Cardiovascular Surgery at Southcoast Health System and Clinical Assistant Professor of Surgery at the Warren Alpert School of Medicine at Brown University in Providence.

Howard Greenfield, MD '85, Miami, FL, is Founder and Principal of Enhance Perioperative & Anesthesia Consulting. He is also one of the founding partners of Sheridan Healthcare and a former chief of anesthesiology at Memorial Regional Hospital in Hollywood, Florida.

1990s

James Goldschmidt, PhD '90, Havertown, PA, is Vice President of Business Development at CASI Pharmaceuticals, Inc., a biopharmaceutical company that develops therapeutics for cancer and unmet medical needs. He has also worked for Macrophage Therapeutics, Johnson & Johnson, Wyeth Pharmaceuticals, and SmithKline Beecham.

David Mauro, MD-PhD '96, Washington Crossing, PA, is Chief Medical Officer of Checkmate Pharmaceuticals, a clinical-stage biopharmaceutical company focused on cancer immunotherapy. Previously he served as Executive Vice President and Chief Medical Officer at Advaxis Immunotherapies. Mauro is a member of the Lewis Katz School of Medicine Alumni Board.

Stephanie Patel, MD '97, FAAHPM, Danvers, MA, is Vice President and Chief Medical Officer of Care Dimensions, the largest hospice and palliative care provider in Massachusetts. She also serves on the faculty of Harvard University's Palliative Care Medicine Fellowship Program and is affiliated with the medical staffs of several hospitals, including Cambridge Health Alliance Hospitals.

David Stuhlmiller, MD '98, FACEP, CMTE, Madison, NJ, is Chief Medical Officer of Air Methods Corporation, a global leader in air medical transport. Stuhlmiller leads a team of 70 medical directors across the U.S., developing best practices to advance the air medical health care industry.

Tamika Webb-Detiege, MD '99, New Orleans, LA, is attending rheumatologist with the Ochnser Health System and Senior Lecturer and Academic Discipline Head for Medical Specialties at the University of Queensland Ochsner Clinical School in Australia. Her clinical interests include lupus, osteoporosis and bone metabolism, rheumatoid arthritis, and vasculitis.

2000s

R.V. Paul Chan, MD '00, Chicago, IL, is Vice Chair for Global Ophthalmology and Director of Pediatric Retina and Retinopathy of Prematurity (ROP) at the Illinois Eye and Ear Infirmary. A volunteer with ORBIS International, which fights blindness around the world, Chan has visited more than a dozen countries to teach local physicians to recognize and treat ROP. "Education leads to sustainability," says Chan, who is a member of the Lewis Katz School of Medicine Board of Visitors.

Susanne Spano, MD '05, Fresno, CA, is Assistant Clinical Professor and Director of Wilderness Medicine Education at the University of California-San Francisco. She contributes to the development of national protocols for delivering prehospital aid in wilderness settings. She also volunteers on the Fresno County Sheriff's Search and Rescue Mountaineering Team and has helped to lead national conferences on disaster and wilderness medicine.

NEWS TO SHARE?
medalum@temple.edu
215-707-4868
800-331-2839

LASKY: COURTESY LARRY MCALLISTER II; WILLIAMS: COURTESY R. NERONI/ROTHMAN INSTITUTE; FINGLETON: COURTESY SOUTHCOAST HEALTH; PATEL: COURTESY CARE DIMENSIONS; WEBB-DETIEGE: COURTESY OCHSNER CLINIC; CHAN: COURTESY ILLINOIS EYE & EAR INFIRMARY.

Measey, Unmasked

This is a story about a once-debilitating disease and its defining impact on a prominent Philadelphia family. But mostly it's a story about gratitude and generosity. It's the story of the Benjamin and Mary Siddons Measey Foundation, a charitable fund that, for the past 59 years, has done more than any other private foundation to advance medical education in Philadelphia.

The story begins in Chester, PA, in 1875 with the birth of William Maul Measey. Growing up an only child, William Measey was just eight when his mother contracted pulmonary tuberculosis and died. The boy was lovingly raised by his father, a prominent Philadelphia banker and official of the Pennsylvania State Treasury. It was his parents who instilled in Measey the importance of familial support and charity from a young age.

Measey went on to law school at the University of Pennsylvania. He set up a practice in corporate law with Owen J. Roberts, who later became a Justice of the United States Supreme Court.

In addition to achieving success in his field of study, Measey learned a thing or two about money management from his father. The utility company stocks in which he invested amassed a small fortune. Measey became so wealthy, in fact, that after World War II, he retired and focused on his true passions: giving to charity, gardening, and traveling. In addition to keeping residence in an Italian-style villa in Haverford, PA, Measey's travels led him to purchase and live in a 900-year-old castle overlooking Lake Thun in Oberhofen, Switzerland. The castle, now a recognized historical site, was deeded to the Swiss government after Measey's passing.

Measey dedicated his life to his parents. So in 1958 at the age of 83, he established a charitable foundation to ensure that his charitable practices and parents' memory would outlast him. He named it the Benjamin and Mary Siddons Measey Foundation. Its founding mission was to provide scholarships for students enrolled in Philadelphia-area liberal arts colleges.

Soon after, Measey fell ill with the same disease that claimed his mother: tuberculosis. He might have died were it not for a lung specialist at the University of Pennsylvania named David A. Cooper, MD.

As it turns out, *Cooper* had nearly succumbed to tuberculosis when he was an intern at the Presbyterian Hospital in Philadelphia back in 1923. But he made a full recovery and became inspired to focus his medical career on diseases of the chest.

During the course of treatment and recovery, Measey recognized something. What had really saved Cooper's life — and enabled Cooper to save his — was medical education. In fact, had physicians known in 1883 what they knew in the 1960s, Measey's mother might have survived.

Supporting medical education, Measey realized, would give his charitable foundation true purpose. Helping medical students would significantly impact people's lives. So in 1965, Measey amended the foundation's mission, making its focus medical education at the five Philadelphia-area medical schools.

Measey died two years later, at 92. Cooper — a trusted advisor to Measey — was appointed Measey Foundation Chair. Cooper served in the role until his own death in 1970.

A succession of pundits — all affiliated with Measey's alma mater, the University of Pennsylvania — have served on the foundation board. Today, the trustees include: Clyde Barker, MD, FACS (Chair of Surgery and Associate Dean for Clinical Education); Marshall Blume, PhD (Director Emeritus, Rodney L. White Center for Financial Research at the Wharton School); James C. Brennan, Esq. (University of Pennsylvania Law alumnus and legal affairs manager of the Measey Foundation); Stanley Goldfarb, MD (Associate Dean for Curriculum); and Ronald Fairman, MD, FACS (the Clyde F. Barker-William Maul Measey Professor of Surgery).

> Since 1976, the Measey Foundation has awarded more than $4.5 million in scholarships to students at the Lewis Katz School of Medicine.

What they have accomplished through the Foundation would make Measey proud.

Half of the foundation's annual funding supports scholarships for medical students the University of Pennsylvania, Jefferson University, Temple University, Drexel University, and the Philadelphia College of Osteopathic Medicine. The other half underwrites professorships and innovative projects that improve medical education.

For the past 50 years, the Foundation has, on average, sponsored up to 50 scholarship recipients a year across all of the medical schools. And since its inception, it has also endowed

William Maul Measey, 1875-1967

STEPHEN GARDNER

nearly 20 professorships as well as scores of innovative programs that have improved methods and modes of medical education in Philadelphia.

Measey professorships are active at the University of Pennsylvania in numerous fields of medicine and surgery, benefitting medical education. At Drexel University College of Medicine, the trustees endowed the William Maul Measey Chair in Medical Education, a position dedicated to academic innovation. The Lewis Katz School of Medicine at Temple University boasts an endowed William Maul Measey Chair in Surgery, held by the internationally renowned cardiovascular surgeon Yoshiya Toyoda, MD, PhD.

According to Measey Foundation trustee Stanley Goldfarb, MD, innovation is Measey's "brand." The trustees have a knack for spotting the most effective emerging methods and techniques of education. In 2005, for example, when the Foundation began funding simulation centers, including the William Maul Measey Institute for Clinical Simulation and Patient Safety at Temple, simulation labs were experimental. Today, they're required, standard fare in medical education.

Since 1976, the Measey Foundation has awarded more than 200 scholarships to students at the Lewis Katz School of Medicine, culminating in over $4.5 million in scholarship awards over the years.

"Temple medical students write us thank-you letters. It's beyond gratifying to see how much our support means to them," says Goldfarb, describing his trusteeship of the Foundation as "an honor and a privilege."

Arthur Rubenstein, MD, a past dean of the Perelman School of Medicine at the University of Pennsylvania, once described the Measey Foundation as "people utterly committed to the future of medicine and medical education."

"I couldn't agree more," says Larry Kaiser, MD, FACS, the Lewis Katz Dean at the School of Medicine and Temple Health CEO. "The Measey Foundation really has an amazing story, full of unlikely turns, all tied to a once-incurable disease. Is there, anywhere in America, a foundation that has done more to benefit medical education innovation in Philadelphia than the Benjamin and Mary Siddons Measey Foundation? Measey's commitment is unmatched."

"We must address the problems related to low-income populations if we are going to improve the health of all Americans."

– STEVEN HOUSER, PHD, SENIOR ASSOCIATE DEAN FOR RESEARCH; PRESIDENT, AMERICAN HEART ASSOCIATION

"REDUCING RISK AND IMPROVING OUTCOMES FOR PATIENTS: THAT'S THE GOAL OF TECHNOLOGY."

– BRIAN O'NEILL, MD, ASSOCIATE PROFESSOR OF MEDICINE

"We embrace humanity at its most diseased, defiant, compliant, and courageous. All comers are welcome. We turn no patient away."

– LARRY KAISER, MD, FACS, DEAN AND CEO

LEWIS KATZ SCHOOL OF MEDICINE

$80 MILLION IN NIH GRANTS

10,000+ ALUMNI

961 STUDENTS

872 FACULTY

92 POSTDOCTORAL FELLOWS

27 DEPARTMENTS

13 RESEARCH CENTERS

9 EDUCATIONAL AFFILIATES

5 CLINICAL INSTITUTES

In 2016, Jeanes Hospital achieved an **"A" RATING** from Leapfrog, a national nonprofit organization that evaluates nearly 2,000 hospitals annually for quality and safety.

"New truths become evident when new tools become available."

– BENNETT LORBER, MD, MACP, PROFESSOR OF MEDICINE

★ ★ ★ ★ ★

Twin 5-Stars: Jeanes and Temple University Hospital both made *Healthgrades'* national "Five-Star Hospital" List for achieving superior patient outcomes in select procedures in 2016.

Temple University Hospital performed **296** organ transplants in 2016.

In 2016, Temple University Hospital's Episcopal Campus accommodated **48,749** Emergency Department visits and **9,687** Psychiatric Crisis Response Center visits

"After obtaining knowledge, the next best thing is to pass it on."

– RICHARD GREENBERG, MD, FACS, CHIEF OF UROLOGIC ONCOLOGY, FOX CHASE CANCER CENTER

"Education leads to sustainability."

– R.V. PAUL CHAN, MD, ALUMNUS, LKSOM CLASS OF 2000

Chevalier Jackson, MD

That's Hard to Swallow

Temple's Chevalier Jackson, MD (1865-1958), is reputed to have personally extracted more than 5,000 objects lodged in patients' throats, windpipes, and lungs. In fact, 2,374 of these life-threatening items (buttons, brooches, screws, bolts, dental bridges, small toys, etc.) are on display at Philadelphia's Mütter Museum. A giant in the field of laryngology, Jackson invented the bronchoscope. He was also the driving force behind the Federal Caustic Poison Act of 1927, requiring that poisonous items be labeled with the Skull & Crossbones symbol.

JACKSON: TEMPLE UNIVERSITY LIBRARIES SPECIAL COLLECTIONS RESEARCH CENTER; OBJECTS: JOSEPH V. LABOLITO

Temple Health
Magazine

Lewis Katz School of Medicine at Temple University
Temple University Health System
Office of Communications
3509 N. Broad Street
Philadelphia, PA 19140

NON-PROFIT
ORGANIZATION
U.S. POSTAGE
PAID
PHILA, PA
PERMIT 5140

Recreating heart function once thought to be gone forever.

During surgery on a young patient hospitalized with end-stage heart failure, Yoshiya Toyoda, MD, PhD, implants a small heart pump to boost blood circulation. This mechanical assist device will dramatically improve the patient's quality of life, allowing her to go back to her life as she waits for a heart match for transplantation.

This life-saving bridge to heart transplantation is possible because Temple Health is home to renowned cardiovascular surgeons who are utilizing some of the most advanced technology.

TEMPLE HEALTH

Tomorrow is Here.

Temple University Hospital
Lewis Katz School of Medicine
Fox Chase Cancer Center
Jeanes Hospital

Temple Health Oaks
Temple Health Center City
Temple Health Ft. Washington
Temple Health Elkins Park

Temple ReadyCare
Temple Physicians
Temple Transport Team

TUH – Episcopal Campus
TUH – Northeastern Campus