“At Geisel, we encourage students to become citizens of curiosity—physicians and scientists who will listen deeply to patients, examine accepted wisdom, and tackle tough questions. That’s how we create leaders, and that’s how we can have the greatest impact.”

—Duane Compton, PhD
Dean, Geisel School of Medicine

From left to right: MD students Frederick Burton III '20, Vivian Bhushan, MS, '20, Trenika Williams, MS, '20, Chad Lewis, MPH, '20.

All photos by Mark Washburn

interaction

DARTMOUTH MEDICINE • FOR TOMORROW

Geisel Launches $250M Fundraising Campaign

GEISEL IS A PLACE WHERE COLLABORATION IS EASY. It's a place where the aspirations of students and faculty find fertile ground in a supportive, close-knit community. It's a place where interaction among disciplines and across Dartmouth fuels discovery and innovation. It's a place where the drive to improve healthcare delivery is interwoven with biomedical research, medical education, and clinical care—always with patients at the heart of our work.

These are the distinguishing characteristics at the core of Geisel's ambitious $250 million campaign, *Interaction*, launched on April 27, 2018, as part of Dartmouth College's campaign, *The Call to Lead*. Geisel's campaign is focused on three strategic imperatives, where philanthropic investments over the next five years will drive successes that are both core and cutting edge:

Educate Complete Physicians

Pursue Bold Ideas

Transform Healthcare

This will include new support for our distinctive medical education program and student scholarships, transformative gifts to Dartmouth's Norris Cotton Cancer Center and The Dartmouth Institute for Health Policy and Clinical Practice, and investments in Geisel's groundbreaking multidisciplinary research centers.

The result will be felt in the lives we touch with improvements in the prevention, diagnosis, and treatment of disease; broad access to high-quality healthcare; and the compassionate care and leadership of outstanding Geisel-trained physicians.

In the pages that follow, read examples of how Geisel students, faculty, and alumni are bringing this vision to life.

KANAK VERMA, MPH ’17, MED ’18

Shouldering Responsibility for the Most Vulnerable Patients

THE NEWBORNS KANAK VERMA CUDDLED WERE SICK. Verma was a first-year medical student at the Geisel School of Medicine, and the infants were suffering from neonatal abstinence syndrome (NAS). Going through opioid withdrawal, the babies wailed and vomited, seized up in agitation and expelled watery diarrhea. Though the patients in her arms were tiny, it was through them that Verma first felt the full weight of the opioid epidemic.

That was five years ago. Today, Verma is poised to begin her residency in pediatrics at Children’s Hospital of Philadelphia and holds a master of public health (MPH) from The Dartmouth Institute for Health Policy and Clinical Practice. She also has coauthored an important research review, recently published in *JAMA Pediatrics*, about the advantages of keeping infants with NAS out of neonatal intensive care units and in the same room with their mothers. Newborns who “roomed-in” with their moms often required less medication than those who spent time in intensive care and were released from the hospital more quickly. Treatment for the approximately 6 out of every 1,000 babies born in the United

Kanak Verma, MPH ’17, MED ’18 and Alison Volpe Holmes, MD, MPH, collaborated on research to improve the care of babies born addicted to opioids. Here, they examine an infant at Dartmouth-Hitchcock.

> "The complete physician is somebody who not only provides medical care to the patient but also takes the time to understand what the patient's life looks like outside the hospital and supports the patient through their experience."
>
> —Kanak Verma, MPH '17, MED '18

States with opioid dependence may improve significantly thanks to this study, conducted by Verma and associate professor Alison Volpe Holmes, MD, MPH.

A public health major in college, Verma was familiar with the emphasis Geisel places on health-systems work before she applied to medical school. This, as well as the opportunity to pursue a dual MD-MPH degree, put Dartmouth at the top of her list. Then, at her admissions interview, she could feel a sense of community from the moment she stepped on campus.

"People look out for each other and support each other," says Verma. "That's something that's been very special. It's what drew me here."

THE CREATION OF A COMPLETE PHYSICIAN

Verma was also drawn to Geisel's curriculum and the priority that's given to developing complete physicians. Basic science coursework in years one and two is complemented with healthcare delivery science classes, so students learn from the start that mastery of clinical knowledge is just one part of being a doctor. Knowing how hospitals work, how to improve systems of care, and how to approach disparate patient populations is vital to realizing the best possible outcomes for patients.

"The complete physician," Verma says, "is somebody who not only provides medical care to the patient but also takes the time to understand what the patient's life looks like outside the hospital and supports the patient through their experience."

For Verma, the complete physician is dedicated to keeping the patient at the center of care—a principle she put into practice during her third-year clinical rotations across the United States. Working in such distinct locations as a high-volume hospital in Hartford, Connecticut, a Navajo reservation in Fort Defiance, Arizona, and at California

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Innovation in Medical Education

While the doctor-patient relationship remains at the heart of medicine, physicians today must work effectively within interprofessional teams, manage the health of diverse populations, and continuously improve the systems in which they work. Geisel meets this challenge with a medical education program that sets the standard for preparing physicians to improve the health of individuals and communities and the ways we deliver care, always recognizing the needs and values of individual patients.

Just as medical practice is evolving, so too, must medical education. The Department of Medical Education serves as the foundation of Geisel's dynamic MD curriculum and as a catalyst for pedagogical innovation. As a partner in the Kern Institute for the Transformation of Medical Education, Geisel is among a select group of institutions at the forefront of advancing medical education nationally.

Geisel has led the way in promoting problem-based, interactive learning; online learning modules now used in nearly every medical school in the country; and the integration of healthcare delivery science into the MD curriculum. In addition, our students learn by doing in contexts with real outcomes—in research labs, in clinical settings, and in the community. Year after year, residency directors nationwide remark on our graduates' clinical preparedness, as well as their understanding of systems of care and readiness to engage in quality improvement work.

Educate Complete Physicians

We will train compassionate physicians who possess outstanding clinical skills, a deep understanding of the scientific basis of health and disease, and proficiency in delivering care within complex social and economic environments. Geisel-educated physicians will be distinguished by their ability to improve the systems in which they work and by their commitment to the needs of individuals and communities they serve.

New philanthropic support totaling $45 million will promote continuous innovation in medical education, enhance the informal curriculum, and increase scholarships for students.

Pacific Medical Center in San Francisco, Verma was exposed to diverse patient populations, disease pathologies, and medical systems. These interactions, Verma explains, reinforced the importance of never making healthcare decisions based solely on how they'd been made in the past and always considering the needs and preferences of the unique patient in front of her.

By the end of her third year at Geisel, Verma knew she wanted to be a pediatrician, and the following year studying for her MPH at The Dartmouth Institute strengthened that decision. In addition to the research on NAS, Verma also collaborated with Assistant Professor Paul Barr, PhD, MSc, on a project to record patients' visits with their doctors so they could absorb the details of the visit at home, share information with family, and ultimately, through better understanding of their treatment, take a more active role in their healthcare. Now, she's passionate about research and quality improvement. "Our responsibilities don't stop at the front gate of the hospital," says Verma. "A physician's roles as a researcher, an educator, and an advocate are invaluable to achieving comprehensive care."

YOU ARE ENOUGH

"I think so much of what I've been able to get involved in and the work that I've done as a medical student is a product of great mentorship," Verma says. Eager to respond in kind to the greater Dartmouth community, Verma has served as a resident advisor to undergraduates, offering academic, extracurricular, and social support. And now she can pass along to undergrads and younger medical students some of the lessons she's picked up along the way.

"Something one of my mentors, Dr. Joe O'Donnell, said to us from day one is that you are enough—what you have in your heart is enough—and that's gotten me through long nights at the library or in the hospital. You may not always know the right answer, but just being here is enough."

This was especially true for Verma in her role as a cuddler. Consoling those babies with nothing more than her gentle attention, she learned that one of her most important duties as a physician is to simply be present with her patients.

LAUREN SEIDMAN

From left to right: Paul Barr, PhD, MSc, Kanak Verma, MPH '17, MED '18, and Michelle Dannenberg, MPH '15, collaborate on Open Recordings, a project to help patients make the most of their visits to the doctor.

From left to right: Dartmouth undergraduate Stephanie Rivera-Ithier D '21 and Geisel medical student Rajiv Raghavan D '13, Thayer '14, MED '18 learn in the lab with Margaret Karagas, PhD, chair of epidemiology and the James W. Squires Professor, and Brock Christensen, PhD, associate professor of epidemiology.

MARGARET KARAGAS, PHD

Stopping Diseases Before They Start

NUMEROUS SERIOUS AFFLICTIONS THAT STRIKE US IN ADULTHOOD—such as cancer, diabetes, heart disease, high blood pressure, and immune system disorders—have roots that stretch back to childhood. These roots are anchored in genetics and fed by the environment. But how do genetics and environment combine to impact health? And exactly how early do environmental exposures begin to affect lifelong well-being?

Margaret Karagas, PhD, the James W. Squires Professor and chair of the Department of Epidemiology at the Geisel School of Medicine, is working to answer these questions. "Dartmouth has the flexibility to leverage talent and initiate bold ideas in ways that may not be possible at other institutions, where the work is more siloed," Karagas says. As director of both the Children's Environmental Health and Disease Prevention Research Center and the Center for Molecular Epidemiology, Karagas leads, mentors, and collaborates with researchers across the College to find the causes of diseases and stop them before they start.

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Pursue Bold Ideas

We will make transformative discoveries that reveal the scientific underpinnings of health and catalyze the development of effective, personalized, and patient-centered approaches to disease treatment and prevention. We will approach complex challenges from fresh angles, dare to ask big questions, and accelerate the pace of innovation.

New philanthropic support totaling $155 million will fuel greater interdisciplinary collaboration and more rapid translation of bold ideas into real health outcomes.

"The importance of early-life environment to lifelong health is becoming increasingly recognized," Karagas explains. "And at Geisel we're finding answers to what causes cancer and what causes adverse child health outcomes."

IMPACT AND OUTREACH

Karagas' work in child health stemmed from her research into bladder and skin cancers, and the effects of exposure to toxic metals in drinking water. Rates of these cancers are high in areas where water supplies from private wells contain arsenic, including in nearby parts of New Hampshire, Vermont, and Maine. "And that made me concerned about whether pregnant women should be drinking that water," Karagas says.

In 2009, as part of the Dartmouth Toxic Metals Superfund Research Program, Karagas, Emily Baker, MD, a Dartmouth-Hitchcock obstetrician, and a student at The Dartmouth Institute for Health Policy and Clinical Practice began a registry of pregnant women who may have been exposed to low levels of arsenic. That registry became the basis for the establishment of the Children's Environmental Health and Disease Prevention Research Center, a multidisciplinary effort to study environmental exposures to common contaminants during fetal development and childhood.

The Center's research revealed that dietary exposure to arsenic—in utero and after birth, from foods like rice and apple juice—is associated with adverse effects on fetal growth, immune system function, and changes in gene expression. These discoveries informed the U.S. Food and Drug Administration's 2016 action limiting the amount of arsenic allowed in infant rice cereal. The Center also works with primary care physicians and pediatricians to help educate families about testing water in private wells and diversifying children's diets, and Carolyn Murray, MD, MPH, director of the Center's Community Outreach and Translation Core, led the development of an interactive web tool that includes tips for reducing arsenic exposure (www.dartmouth.edu/~childrenshealth/arsenic/).

> "This is where Dartmouth stands apart—not only in its interdisciplinary research but also in its interdisciplinary training."
>
> —Margaret Karagas, PhD

LOOKING TOWARD THE FUTURE

Another benefit of the pregnancy cohort is that it enables other investigators to ask important research questions. Using the data and samples already collected from participating mothers and their children, Geisel Associate Professor Brock Christensen, PhD, is analyzing breast milk for early indicators of breast cancer risk; and Associate Professor Diane Gilbert-Diamond, ScD, is connecting certain environmental exposures with childhood obesity. These are just two examples of the ways in which Karagas and her colleagues are utilizing the trove of epidemiologic data they have gathered over almost a decade to answer new questions about disease origins and children's health.

In fact, researchers across Dartmouth use the pregnancy cohort. "We have collaborators in biology, Earth sciences, Geisel, The Dartmouth Institute, Dartmouth-Hitchcock, the Cancer Center," Karagas says. "By nature our work is very interdisciplinary."

Karagas strongly believes this interdisciplinary approach is essential to becoming a successful researcher, and she's committed to training the innovators of the future. She was one of the founders of Geisel's graduate program in Quantitative Biomedical Sciences, which encompasses a team of Dartmouth faculty with expertise in subjects such as genomics, engineering, computational structural biology, neuroimaging, data science, and population health. PhD students in the program cross-train in epidemiology, biostatistics, and bioinformatics. "The next generation of scientists cannot know just one discipline. That is not the way to solve the complex problems our world faces. This is where Dartmouth stands apart—not only in its interdisciplinary research but also in its interdisciplinary training," Karagas says.

It's this flexibility at Dartmouth, Karagas believes, that allows her and fellow researchers to launch bold ideas that receive national attention. The Center for Molecular Epidemiology was recently refunded by the Centers of Biomedical Research Excellence (COBRE) for a second five-year phase, and building off of the Children's Environmental Health and Disease Prevention Research Center, Karagas and colleagues were just awarded a grant from the Environmental Influences on Child Health Outcomes (ECHO) program to participate as one of 84 cohorts in a seven-year nationwide initiative.

"Our next big step is to look beyond one exposure at a time to the totality of people's exposures—their home environment, their school—and their genetics. And to see how all those pieces fit together to create a healthy child. Our goal," says Karagas, "is to sustain health."

LAUREN SEIDMAN

Improving Cancer Care and Reducing Costs

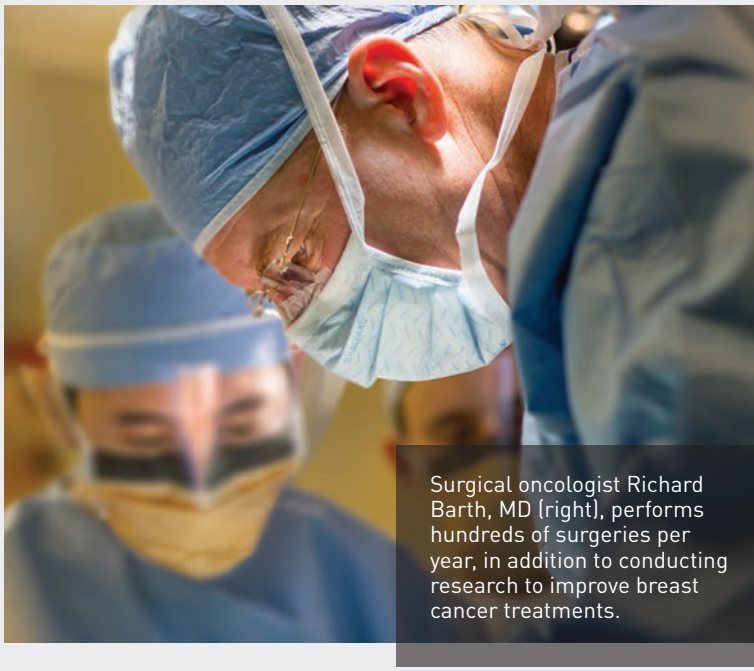
Surgeons love to fix things. Often that means removing a tumor or repairing a joint. But for Richard Barth, MD, a surgical oncologist at Dartmouth's Norris Cotton Cancer Center, that also means improving the entire approach for one of the most common surgeries he does: lumpectomy, removing a tumor while leaving the breast intact.

Approximately one in three women who undergo a lumpectomy need a second surgery to remove cancerous tissue that was missed the first time. Barth believed better outcomes were possible. So he teamed up with biomedical engineers from Dartmouth's Thayer School of Engineering, Venkat Krishnaswamy, PhD, and Keith Paulsen, PhD, the Robert A. Pritzker Professor of Biomedical Engineering. With seed funding from a generous donor, the trio invented a highly effective, low-cost device called the Breast Cancer Locator.

"It became obvious that we needed to form a company to further develop this device," says Barth, professor of surgery at Geisel and section chief of general surgery at Dartmouth-Hitchcock. "That's where we found a lot of help here at Dartmouth."

Barth received the 2015 Dartmouth SYNERGY Clinician-Entrepreneur Fellowship, providing him with time and mentorship to pursue commercial development of the Breast Cancer Locator. In addition, the team secured a patent through Dartmouth's technology transfer office and consulted with Tuck School of Business students to build a plan for their company, CairnSurgical. Even the team's manufacturing space is conveniently located—in the Dartmouth Regional Technology Center, less than a mile from the Cancer Center and Dartmouth-Hitchcock Medical Center, where Barth practices.

Early clinical trials of the Breast Cancer Locator demonstrate near perfect accuracy and no need for repeat surgeries, even while removing a minimum of breast tissue. That's better for patients and could potentially save the healthcare system more than $300 million annually by avoiding repeat surgeries.



Surgical oncologist Richard Barth, MD (right), performs hundreds of surgeries per year, in addition to conducting research to improve breast cancer treatments.

> "Cancer Center investigators have launched a wide variety of startup companies based on Dartmouth discoveries, ranging from new immunotherapy drugs to new imaging devices."
>
> —Steven Leach, MD
> Director, Norris Cotton Cancer Center

CULTURE DRIVES INNOVATION

Innovating to improve care for patients is part of the culture at Dartmouth's Cancer Center. With faculty from 21 departments across Dartmouth, multi-disciplinary teams pursue scientific and medical advances while ensuring that all care remains intensely personal—aligned with the needs and values of patients. In fact, many discoveries now revolutionizing the prevention and treatment of cancer can be traced back to Dartmouth.

"Cancer Center investigators have launched a wide variety of startup companies based on Dartmouth discoveries, ranging from new immunotherapy drugs to new imaging devices," says Steven Leach, MD, the Preston T. and Virginia R. Kelsey Distinguished Chair in Cancer and director of Dartmouth's Cancer Center. "This is the way that our cancer center will ultimately have the biggest impact, by bringing Dartmouth's discoveries to market for the benefit of all. But we can't do that without the seed funding made possible through philanthropy."

New philanthropic support of $100 million—a critical part of Geisel's $250-million campaign—will leverage the Cancer Center's unique culture to spur advances in both the discovery and delivery of cancer care and prevention.

JENNIFER DURGIN

Corey Siegel, MD, MS, confers with Jessica Caron, a patient with Crohn's disease, about her care. Caron is one of the patient leaders collaborating on IBD Qorus.

COREY SIEGEL, MD, MS '09

Rewriting the Rules of Patient Care

COREY SIEGEL TELLS A TALE OF TWO PATIENTS. One was a 28-year-old man from Maine, the other a 20-year-old woman from Vermont. Both suffered from mild to moderate Crohn's disease, and both had found ways to manage their symptoms with modest success. If Siegel had followed the longstanding treatment plan for Crohn's disease, he'd have put these seemingly similar patients on a similar course of medication as practice guidelines suggest. But the patients and their needs were unique—and Siegel is one of the Dartmouth innovators working to rewrite the old rules of healthcare.

Siegel is section chief of gastroenterology and hepatology at Dartmouth-Hitchcock and codirector of its Inflammatory Bowel Disease (IBD) Center. At Geisel, he's an associate professor of medicine and of The Dartmouth Institute for Health Policy and Clinical Practice, where he earned a master's in healthcare research in 2009. The seeds of the work he's doing today were planted while he was studying at The Dartmouth Institute.

"The idea of personalized medicine, shared decision making, and using evidence in a way that patients can really understand—all that came from my time at The Dartmouth Institute," Siegel says.

> "Some information you just can't get from a chart. Now, we're walking into a visit prepared with an understanding of what the patient is most concerned about. It allows the visit to be about the patient, not about their disease."
>
> —Corey Siegel, MD, MS '09
> Associate Professor of Medicine and of The Dartmouth Institute

PERSONALIZED, PROACTIVE, PATIENT-CENTERED CARE

Siegel explains that Crohn's disease, which is a type of IBD, "is a very varied illness depending on who you are and the type of Crohn's you have. Some patients do fine on minimal or no medications and others are in the operating room within six to twelve months of diagnosis." It's a disease that can and should be treated before it becomes severe, yet can't be handled with a one-size-fits-all approach. By collaborating with fellow physicians and researchers from Geisel, Dartmouth-Hitchcock, and other institutions; working with health centers across the country; and, most importantly, partnering with patients, Siegel is creating tools to help doctors provide IBD treatment that's personalized, proactive, and patient-centered.

One of these—which Siegel created with his wife, Lori Siegel, PhD, a scientist with expertise in complex systems modeling—is a decision-making tool called PROSPECT. Currently being studied with over 200 patients nationally, PROSPECT is a web-based application that displays predicted outcomes for individuals with Crohn's disease based on clinical, genetic, and blood-based variables. In a clear chart, patients can see their risk of developing, over a three-year period, the types of complications that would require surgery. Turning complex clinical data into patient-friendly information, PROSPECT helps doctors communicate with their patients about specific risks and treatment options, and encourages patients to partner with their doctors in making treatment decisions. When the 28-year-old man from Maine saw that he had a high risk of developing complications, he decided to go on the most effective medications available. When the 20-year-old woman from Vermont saw that her risk of complications was low, she decided to maintain her regimen of diet and exercise.

Another web-based tool invites patients to report on the status of their symptoms and quality of life through a simple survey completed before an office visit. For Siegel, the most important question in that survey asks patients to state the number-one concern they'd like to discuss during the appointment. "Some information you just can't get from a chart," Siegel says. "Now, we're walking into a visit prepared with an understanding of what the patient is most concerned about. It allows the visit to be about the patient, not about their disease."

The survey is part of a larger program called IBD Qorus, which is led by Siegel and Gil Melmed, MD, of Cedars-Sinai Medical Center in Los Angeles in collaboration with the Crohn's and Colitis Foundation. The goal of IBD Qorus is to address high levels of variation in care for patients with Crohn's and ulcerative colitis, another form of IBD. "We built this initiative," Siegel says, "so we can measure how we're delivering care and then develop implementation programs to make improvements." Currently, 30 medical practices across the country are participating and the goal is to recruit 60 more over the next three years. Patients not only provide feedback that encourages development of high-quality, patient-centered care but also participate in program leadership.

TEAM EFFORT

As a graduate of and associate professor at The Dartmouth Institute, Siegel sees IBD Qorus "as a perfect example of how concepts about delivering healthcare developed there can spread nationally or even internationally." Siegel recently returned from conferences in Asia, Europe, and South America, where interest in IBD Qorus is high.

It takes teamwork to spread the concepts born and nurtured at The Dartmouth Institute, and Siegel treats all of his colleagues as part of the team—from the students, junior faculty, and research assistants he's mentored to physicians and nurses at Dartmouth-Hitchcock. "You can't do this work in isolation," Siegel says. "I've been extremely lucky to work with great collaborators."

And at the heart of this team are the patients with IBD: people with different beliefs, preferences, and needs. People like the man from Maine and the woman from Vermont, who chose drastically different approaches for their IBD treatment—and both achieved complete remission of Crohn's disease.

LAUREN SEIDMAN

Transform Healthcare

We will lead the discovery, evaluation, and dissemination of healthcare solutions that address the urgent problems of spiraling costs, inconsistent quality, and inequity. We will accelerate the creation of high-performing systems of care in which patients' values and goals guide decisions. Through our educational programs, our impact will be exponential—as we inspire physicians, nurses, business leaders, and policy makers to lead the change that's needed in healthcare.

New philanthropic support totaling $50 million for The Dartmouth Institute for Health Policy and Clinical Practice will catalyze innovation, expand access to our educational programs, and enable greater advocacy and policy work to transform healthcare.

NARATH CARLILE, MED '09, MPH

An Alumnus Answers the Call to Heal Patients and Systems

WHERE SOME PEOPLE SEE PROBLEMS IN HEALTHCARE, NARATH CARLILE, MED '09, MPH, SEES SYSTEMS—systems that either promote or inhibit the best care possible.

"The core part of our calling as physicians is to heal," says Carlile, an internist at Brigham and Women's Hospital in Boston and an instructor in medical informatics and innovation at Harvard Medical School. "To do that effectively, you have to address the patient holistically. We cannot just attend to their medical problems but must also address genetic, behavioral, and social factors if we are going to truly heal. For me, this grounding in systems thinking started here at Dartmouth and connected me to a community of incredible people who are boldly trying to heal the world."

LISTEN, LEARN, AND WORK TOGETHER

It didn't take long for Carlile to make his own impact. As a medical student, he traveled to Tanzania—one of Geisel's global health partner locations—to observe clinical rounds within the national hospital. Then, with the guidance of his mentor, Lisa Adams, MED '90, director of Geisel's Center for Health Equity, he shared his observations with Tanzanian physicians, who advised Carlile on which quality improvement projects to tackle.

"Dartmouth's approach to global health is not to just go somewhere and fix things," explains Carlile. "The guidance is to go, think, learn, discuss, and then work together with locals to decide what is most important and what will be most needed and most impactful."

Carlile spearheaded two quality improvement projects at the 1,500-bed Muhumbili National Hospital—one high-tech and one low-tech. He built an open-source, cell phone-based paging system that made it possible for physicians in the hospital to reliably and quickly get critical results from the hospital lab, and he led a hand hygiene initiative for the entire hospital.

"In medicine, it's often the simple things, done consistently, that have the biggest outcomes," says Carlile.

Narath Carlile, MED '09, MPH

GREW UP: South Africa and Canada.

EDUCATION: York University '94 (BS in Computer Science); Geisel School of Medicine '09 (MD); Harvard School of Public Health '13 (MPH).

RESIDENCIES: Brigham and Women's Hospital, Boston-Internal Medicine; Global Health and Social Equity.

FORMATIVE EXPERIENCES DURING MEDICAL SCHOOL: Led two quality improvement initiatives at Muhumbili National Hospital in Tanzania; assisted with the creation of the Open School, a learning community within the Institute for Healthcare Improvement; and collaborated on research to model complex physiological systems in infants—a modeling tool he now uses to transform healthcare organizations.

THE COMPLETE PHYSICIAN

Throughout residency and now in his career, Carlile has continued to lead quality improvement initiatives, both domestically and internationally. In addition to his primary care practice and teaching responsibilities, Carlile serves as chief medical officer for a healthcare start-up, Act.md. The company's digital platform creates a way for patients, families, and care teams to communicate more easily and securely using social networking and project management strategies. Carlile believes this approach could transform primary care, chronic disease management, and disease prevention—in part, by tapping into the latent potential of peer-to-peer support and caregiving at the community level.

Carlile's ability to study and improve systems, to use the very best evidence-based approaches, to collaborate with diverse teams, and to keep patients' needs and values at the center of care are what make him a shining example of "the complete physician." And he sees the same qualities in the Geisel medical students and recent graduates whom he oversees at Brigham and Women's.

"Geisel medical students have excellent medical knowledge and clinical skills. But they also have this ability to think of a bigger perspective, to think more holistically about the patient, and that makes them a delight to work with," says Carlile.

It's an approach to medicine that he honed at Dartmouth, and it continues to define a Geisel medical education.

"Dartmouth helped me fulfill the things which I held closest to me," adds Carlile, "caring directly for patients and being prepared to think about systems as a whole and to work to make things better for the community as a whole. That's something I only dreamed of doing as I entered medical school."

JENNIFER DURGIN

The Campaign at a Glance

EDUCATE COMPLETE PHYSICIANS

Medical Education	$ 15,000,000
Scholarships	$ 20,000,000
Center for Health Equity	$ 10,000,000

PURSUE BOLD IDEAS

Dartmouth's Cancer Center	$ 100,000,000
Center for Immunotherapy	$ 10,000,000
Center for Genomic Medicine	$ 10,000,000
Lung Biology Center	$ 10,000,000
Children's Environmental Health and Disease Prevention Research Center	$ 10,000,000
C. Everett Koop Institute	$ 5,000,000
Center for Technology and Behavioral Health	$ 10,000,000

TRANSFORM HEALTHCARE

The Dartmouth Institute for Health Policy and Clinical Practice	$ 50,000,000

TOTAL GOAL $ 250,000,000

"The greatest challenges in human health will be overcome through the seamless integration of biomedical discovery and care delivery—the very space where Geisel excels."

—Duane Compton, PhD
Dean, Geisel School of Medicine