In 2013, Adams, the associate dean for global health, established the Center for Health Equity at Geisel—while leading health equity programs at both the medical school and Dartmouth’s Dickey Center for International Understanding. The idea, she says, is to help medical students develop careers addressing health inequities through research, teaching, and practice by accessing domestic and global programs that promote health equity.

Thirty percent of Geisel students and 10 percent of Dartmouth undergraduates are interested in global health. And now more than 60 Dartmouth faculty are actively engaged in professional development in global health and working with students, residents, and fellows.

Adams’ leadership and collaboration with her colleagues at the Dickey Center (particularly Anne Sosin D ’02, who is the Global Health Initiative program director there), and Dartmouth-Hitchcock, has led the development of global health programs with positive health outcomes for individuals and their communities.

“I’ve been working across Dartmouth for a long time—it has never made sense to me that there are separate programs for medical students, undergraduates, and residents and fellows...”

Lisa V. Adams MED ’90, is driven by a desire to tackle complex and pervasive inequities in health, including the socio-economic and political factors driving health outcomes. She does this in part by cultivating strong long-term Dartmouth partnerships both domestically and internationally in medically underserved areas.

Dartmouth aligns global health programs

by Susan Green
at Dartmouth-Hitchcock,” says Adams. She and her colleagues envisioned a cohesive program and have been working toward that goal in healthcare programming.

Now their vision has been realized—Dartmouth’s successful international and domestic global health programs will be more closely aligned under the new Center for Global Health Equity.

“This brings increased opportunities for partnerships with Geisel’s international programs along with domestic programs in rural and urban healthcare to strengthen and advance the training of future global health leaders—leaders with the professional and interpersonal skills, the cultural humility, and the experience needed to work effectively within interdisciplinary, multi-national teams.

“Global health is about working with our partners to help them achieve their priorities and many times that’s best accomplished through training and mentoring,” Adams explains. “And these collaborations often evolve into increased student opportunities.”

For example, Mary Chamberlin, MD, an assistant professor of medicine at Geisel who specializes in breast cancer, began working in Rwanda as part of the medical school’s involvement in the Human Resources for Health Program. She then created a global oncology training opportunity for hematology/oncology fellows and is now exploring cancer care in Kosovo, where undergraduate and medical students are assisting local partners in researching options for optimal breast cancer screening and cancer-related palliative care.

An undergraduate health policy course co-administered by the Dickey Center and Rockefeller Center, engages three-person teams in policy research and intensive 10-week international internships serving high-level clients, including ministries of health.

A collaboration between Geisel and the Muhimbili University of Health and Allied Sciences in Dar es Salaam, Tanzania, and the DarDar Health Programs allows for a yearly clinical research elective open to fourth-year medical students and internship opportunities for undergraduates.

“This summer an undergraduate gathered information on the aging patient cohort in the pediatric HIV program—many of whom are now teenagers—to make sure we have services for this population,” Adams says.

To further immerse students and faculty in thriving opportunities across Dartmouth, Adams and Sosin created a broader network of global health partners, launched a Global Health Colloquium including Dartmouth-Hitchcock colleagues to ensure best practices in global health engagement and education, and created a curriculum to prepare students before they travel.

But Adams says this is just a start, “The new Center for Global Health Equity provides the ideal opportunity for further growth and collaboration to fully embody the One Dartmouth model.”

**DOMESTIC PROGRAMS**

1. New Hampshire and Vermont—Free health clinics and health education for migrant farm workers, refugees, and the underserved in rural and urban communities

2. Native American Communities in Maine and Minnesota—Promoting healthy behaviors in the context of cultural traditions

**INTERNATIONAL PROGRAMS**

1. Arctic—Leading the Lancet Commission on Arctic Health [multiple partners—Canada, the Kingdom of Denmark (including Greenland and the Faroe Islands), Finland, Iceland, Norway, Russia, Sweden, and the U.S.]

2. Central America—Education and training collaboration with the Central American Healthcare Initiative

3. China—Bilateral student exchanges with Chongqing Medical University

4. Colombia—Mental healthcare delivery

5. Haiti—TB and HIV care

6. Honduras—Cervical cancer prevention and treatment

7. Kosovo—Cancer and palliative care; Maternal and child healthcare delivery

8. Nicaragua—Hearing loss prevention and treatment

9. Peru—Emergency preparedness and telehealth

10. Rwanda—Healthcare workforce development

11. Tanzania—TB vaccine development; TB prevention and treatment; Pediatric HIV care delivery; Research training in infectious disease
Kata Sasvari
GLOBAL

Michael Nasr ‘21
Medical devices that take advantage of existing resources

A global health scholar and past co-president of Geisel’s chapter of the international Global Surgery Student Alliance (GSSA), third-year medical student Michael Nasr ‘21 is pairing his engineering expertise with his interest in surgery and global health work to minimize the expense and improve the outcome of surgical intervention.

“Surgical innovation is predominant in western medicine and the developed world,” he explains, “but in a lot of developing countries physicians don’t have the necessary resources to use imaging machines or surgical devices that were designed for a different context.”

In the global health sphere, surgeons bring their own equipment, perform the surgery, then depart—leaving longitudinal care to local hospital staff. Though local physicians can be trained to perform the surgeries, they lack access to low-cost medical devices that contribute to that care.

Nasr wants to change that.

Last September he, Sara Ratican ‘21, Landis Walsh ‘22, and William Smith ‘22, represented Geisel in the Northeast Global Surgery Hackathon in Boston, MA. Physicians with experience in global surgery presented confounding problems to competing teams. Competitors had two days to create a solution—then pitch it to a panel of physicians who decided whether or not the solution was viable.

“A surgeon presented our team with spinal surgery he performed on an 18-year-old patient—the surgery went well. But when the surgeon returned for a follow up visit six months later, the patient had died from complications due to pressure ulcers. The hospital didn’t have the necessary infrastructure or support services to rotate bedridden patients. This was shocking to us,” Nasr says.

The Dartmouth team’s solution was ingenious—an air mattress with different valves and pistons that open and close to shift a patient’s pressure points. They pitched their idea and won the competition.

Nasr envisions a time when impoverished and disenfranchised people everywhere will have access to inexpensive surgical devices.

“One thing we in GSSA want to do is to encourage medical, undergraduate, and graduate students at Dartmouth to develop inexpensive solutions—build a prototype then pitch it to investors,” Nasr says. “I see it as a brain trust of people interested in global health all working together. That has the potential to really make a difference.”

Patrick Tolosky ‘21
Building sustainable relationships

The Q’eros Nation in the Andean region of rural Peru may lack access to traditional healthcare systems, but they have something modern medicine lacks—easy access to native plants that have kept their people healthy for hundreds of years.

Traditional botanical medicine is sacred to the Q’eros Peoples, and Patrick Tolosky ‘21 has been helping them preserve this information for future generations. By summer’s end last year, they had photographed forty-two plants and recorded interviews regarding essential information for each, although hundreds of plants remain to be documented.

“My original plan for this community driven project was to finish the catalog while in Q’eros,” Tolosky recounts. “But with input from the Dickey Center, I realized this was too ambitious to complete in several weeks, so I refocused to data collection as the project’s primary goal.”

Stuart Grande, PhD, an adjunct instructor at The Dartmouth Institute for Health Policy and Clinical Practice, helped Tolosky with logistics of designing research to yield lasting health strategies. “Stuart and I talked about expectations driving global health workers—such as arriving in a country and wanting to get to work immediately to maximize the efficiency of a project. This attitude negates the importance of building sustainable working relationships within a community and overlooks the significance of taking an hour or two to sit together and share stories over a meal. Cultural humility is really the glue of international health work.”

The catalog is a simple Google Doc that works on any computer and can be edited offline—in Quechua. Tolosky and Grande are now brainstorming about sharing this experience with a broader audience in a culturally sensitive way that contributes to the knowledge of how to engage in meaningful impactful work within the global health sphere.

“Going forward, I want to continue working with communities around the world, and within my own community, to bring people together to create novel solutions to health inequities due to ethnicity and race, to rising suicide rates, gun violence, or biodiversity sustainability,” he says. “In this way, we can build a robust healthcare system that has the capacity to weave together what we need in order to build a sustainable future.”
Kristen Jogerst MED ’17
Surgical education within the global health agenda

After her third year of medical school, Kristen Jogerst MED ’17 took a break. “I didn’t know what type of doctor I wanted to be or what type of residency I wanted to pursue,” she recalls. During that time, she studied health outcomes and global health systems at Harvard T.H. Chan School of Public Health.

One year, and a master’s degree in public health later, she realized she could pursue surgery and still work in global health. “Based on prior burden of disease studies, it is estimated that the lack of access to safe and affordable surgery leads to more fatalities than HIV, TB, and malaria combined,” Jogerst notes.

The Lancet Commission on Global Surgery says surgery, often ignored in favor of infectious disease, is an ‘integral, indivisible component of a properly functioning health system, and all people should have access to safe, high-quality surgical and anesthesia care with financial protection when needed.’

Jogerst returned to Geisel secure in her decision to become a surgeon.

During her fourth year, she spent five weeks with one of the DarDar programs in Dar es Salaam, Tanzania. She spent time in the OR meeting local surgical residents, observing their surgical program, and learning about their future hopes.

“Spending time at Muhimbili University was very motivating—the local residents taught me a lot,” she says.

The lessons Jogerst learned in Tanzania stayed with her. As a resident at the Mayo Clinic in Arizona, she has been conducting surgical education research and advocating for surgical education reform—culminating in a fellowship as a Surgical Education and Simulation Research Fellow at Massachusetts General Hospital, a program dedicated to training academic leaders in surgical education, research, and simulation.

As part of her fellowship, Jogerst is utilizing video-based education tools to create open access video modules of basic surgical anatomy. The overall goal is to spread surgical knowledge beyond the walls of the anatomy lab.

“Access to high-quality continuing medical education is unavailable to many, not just here in the U.S., but across the globe,” she says. “Knowledge is powerful. Everyone should have access to surgical knowledge and medical education resources at a very low cost, regardless of where they live—this is what keeps me motivated.”

Susan Green is a Senior Writer for Dartmouth Medicine.