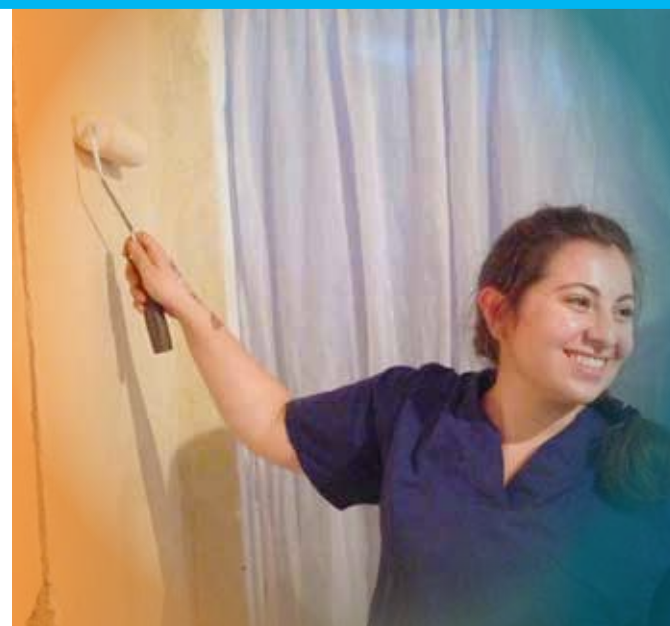


# BEYOND COSTA RICA'S IRON GATES



**THE PATIENTS WAITED IN LINE FOR FOUR HOURS; MANY HADN'T SEEN A DOCTOR IN MONTHS OR YEARS. THE STUDENTS RUNNING CLINICS IN A SQUATTER TOWN IN SAN JOSÉ WERE IN FOR A BUSY 10 DAYS.**

**BY LARA EHRlich**

**N**ine students from BU Sargent College filed onto the bus in front of their hostel's iron gates. As the bus wound through the San José streets, they tried to reconcile their preconceived vision of Costa Rica—beaches, trees, umbrellas—with this forbidding city of barbed wire, graffiti, and stray dogs.

The interdisciplinary group of students had dedicated their spring break to a service-learning trip providing free health services to Costa Rican residents without access to care. During the 10-day medical crash course, the Sargent team would help treat more than 300 patients; for many of the students, it was their first clinical experience. "I didn't know what to expect because I had never done anything like it before," says health science major Kate Festa (CGS'11, SAR'13, SPH'13). "I just went in with an open mind and was willing to do whatever they needed me to do." To enhance their medical work, the students engaged in cultural education programs, including a lecture about the health care system and an intensive Spanish class, as well as visits to a women's hospital, a nursing home, and a day care center.

## **ONE DAY, EIGHTY PATIENTS**

The bus pulled up to a church in the heart of a squatter town that is home to some of the capital's poorest residents. A team of volunteers from Conexión, a local grassroots organization that develops social projects to help those in need, was already setting up at the church. The students and Conexión volunteers assembled two medical tents, two nutrition tents, and a pharmacy tent, and then people arrived in droves, says Anna Monahan, clinical administrator in the Department of Health Sciences, and one of the two Sargent internship coordinators leading the trip. The scene quickly took on a festive atmosphere; Conexión had a trampoline for the kids, a face-painting station, and even a DJ who alternated between playing music and inviting patients into the tents.

The Sargent students—from the nutrition, human physiology, physical therapy, and health science programs—spread out, filling in wherever they were needed. Nutrition graduate student Kate Donovan ('16) took up a post in the nutrition tent, while Festa manned the triage area—checking blood pressure, respiration, pulse, weight, and height, and working with translators to record patient intakes. "At first, it was scary to do medical things that are really important to these people," Donovan says. "But once I jumped in and did it, I realized that I knew a lot more than I'd thought. And the patients were just so happy that we were there and that we cared." In the first day alone, the students helped to treat more than 80 people, many of whom had waited in line for more than four hours.

Costa Rica's universal health care system, *la Caja*, covers the majority of citizens. However, the country is also home to an estimated 300,000–500,000 Nicaraguans, many of whom are thought to be illegal immigrants, who must wait for volunteer medical service teams to address even basic

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health needs. Most of the patients waiting in line for the Sargent students required treatment for conditions that could have been prevented or treated with regular care—a man with a painful rash, a woman with asthma, an older man suffering from an enlarged spleen. “It was hard to realize that when we left, they may not have care again for another five years,” Festa says.

Even Costa Ricans who have health insurance experience long delays in scheduling physicals and checkups due to a reported shortage of physicians and equipment. Conexión told the Sargent team an infamous story about a pregnant woman who tried to book an ultrasound. “It was scheduled for 2020,” Monahan says. “So even when they do have health insurance, they don’t have access to what the system considers nonessential tests.”

### UNDERSTANDING A CULTURE

While working alongside Conexión volunteers, the students got an inside look into the country’s approach to health care. “They’re all about the experience,” Monahan says. “The volunteer doctor had a big heart, but he would spend two hours with a patient who had a cold, and meanwhile we were trying to move people along. That’s how most of the patients got seen.”

“We found out later he was also praying with them,” adds Shelley Brown, clinical instructor in the health science program and the trip’s coleader. “I wanted to be able to say, ‘Okay, great,’ but you’re going to lose all those other patients who are waiting.” With a line at least twenty patients deep at any one time, the students were hesitant to even take a lunch break. At

### MEASURABLE IMPACTS

**300,000–500,000** Nicaraguans in Costa Rica who don’t have access to health care

**300** patients treated by Sargent students in the 10-day service trip

**8** clinical centers on BU’s campus for students to develop their skills under supervision of experienced clinicians

**1,400** Sargent- or BU-affiliated clinical sites throughout the world, including top hospitals, clinics, and private practices, as well as nonmedical settings such as schools and community agencies

noon, the community insisted they stop working and sit down for a feast the local women prepared and served in the church. “Even if you have 100 people waiting, when it’s time for lunch everyone stops what they are doing and eats,” Monahan says. “It’s part of the culture.”

Understanding the culture was crucial to the students’ ability to serve their patients—and to accept their own capacity as health care workers. For Festa, whose duties included house visits, limits became especially important. The community guided Festa door-to-door through the squatter town, ensuring that everyone who required medical attention had the opportu-



**“Once I jumped in and did it, I realized that I knew a lot more than I’d thought. And the patients were just so happy that we were there and that we cared.”**

**—Kate Donovan (16)**

nity to be seen. One of their most urgent stops was to the house of a 15-year-old girl who was nine months pregnant.

“She was due in just days, and she was telling the translators that she would have to walk two miles uphill to the clinic when she’s ready to give birth. She looked terrified, and I tried to comfort her,” Festa says. “You can tell when someone really cares, no matter what language you’re speaking. It sounds so clichéd, but it was important to smile and shake people’s hands and speak enthusiastically. It can be tempting to move patients along, especially when we were so busy, but we tried to connect with everyone.”

With only a small window of time for each patient, the students struggled with the desire to connect more, to *do* more. Donovan recalls one of many women who visited the nutrition tent for advice on losing weight. “What do you eat on a daily basis, and how do you exercise?” Donovan asked, only to discover that the woman, like most of the people in line, could only afford rice and beans. Compounding the nutrition problem, the San José residents “don’t feel safe enough to go for a walk outside,” Donovan says. “It’s not like in Boston when someone who wants to lose weight can get a gym membership, a personal trainer, and a nutritious diet.”

The students needed to find creative ways to counsel their patients. For those who were unable to exercise outside, “we suggested they march in place while cooking,” Donovan says. The students made body mass index charts so people could monitor their weight and showed them how to approximate healthy serving sizes (a fist = one cup). “Culturally, they’re not going to be able to change certain habits, so it’s important to meet them in the middle and give them sustainable ways to take corrective steps in their own health,” Festa says. “This trip made me realize how important it is to see what’s going on in a community before you try to change it.” **IS**

## BECOMING AN ADVOCATE

AS A YOUTH, **DANA ARAVICH (14)** CLEARED THE HURDLES THROWN IN HER PATH BY A DISABILITY; AS A STUDENT, SHE LEARNED TO HELP OTHERS DO THE SAME.

BY RACHEL JOHNSON

**B**orn with impaired vision, Dana Aravich (14) knows firsthand how frustrating it can be to have a disability. As a youth, she faced obstacles, from a lack of services in her rural community to difficulty navigating the complex health care system, that left her determined to help people facing similar challenges.

Occupational therapy student Aravich recently completed an Albert Schweitzer fellowship, which offers the chance to devote a year to health-related service initiatives aimed at supporting society’s most vulnerable. Aravich chose to spend her Schweitzer year at the Boston Home in Dorchester, Massachusetts, a residential community for adults with progressive neurological diseases like multiple sclerosis (MS). She originally planned to set up technology services for the residents—helping them reconnect to friends and family through social networking platforms like Skype and Facebook. “Research shows that people with MS have lower levels of social support and connection to their communities,” she says, “so I thought, ‘This is easy, we’ll teach them how to use computers; it’ll be empowering.’”

The problem was, the computers in the Boston Home’s cybercafe—all acquired through donations—had never been upgraded. In fact, they were so old, they couldn’t be updated. Aravich’s original ideas had to be discarded, but ultimately, she says, the project became much more meaningful.

Aravich began to show the residents how to promote changes at the Boston Home themselves, to take ownership in their lives. “My project became teaching the residents advocacy skills,” she says. “Residents helped collect data used to write a grant and gather information on how many people were using

the cybercafe. We were able to hold a meeting with the administration and really talk for the first time about what the problems were and how to address them.” Aravich explained the kinds of technology that would help, the residents told their own stories, and the administration addressed budgetary limitations. Together, the group came up with a technology plan that worked for everyone. “It’s about helping people say, ‘This is my life, I’m not going to sit back and be passive,’” says Aravich. “Having had to fight for various things through the government and other programs, I realize that I, as a person with a disability, have a hard time navigating that system. And then I work with other individuals who don’t have the support that I have, but they know what’s going on with themselves, and their stories have to be told.”

Not only did the Boston Home solve the immediate computer problem—new computers and equipment were funded through donations and grants—but it also created a system for continuing resident self-advocacy in the future. “The residents really took off with the idea and made it their own,” Aravich says. Today, several of the residents are on a technology council that meets regularly with the administration to address resident needs. Aravich plans to continue exploring advocacy skills for people with disabilities after graduating. “Professionals and residents can, as a team, come together and address those issues. Ideally, what we are supposed to do as occupational therapists is help people find meaning, meaning through occupation—those activities that we find important in our lives. If given the opportunity to advocate, anyone with or without a disability can make those changes and improve people’s lives.” **IS**



PHOTO BY CYDNEY SCOTT

# Grant Awards

BU SARGENT COLLEGE'S FACULTY RECEIVED  
**\$10,792,130** IN RESEARCH FUNDING IN 2012–2013.  
 HERE IS A LIST OF OUR PROJECTS AND THE  
 AGENCIES AND FOUNDATIONS SUPPORTING THEM.

PRINCIPAL INVESTIGATOR	TITLE OF PROJECT	AGENCY/FOUNDATION	FUNDS AWARDED/ AVAILABLE 2012–2013	TOTAL AWARD
Sudha Arunachalam, assistant professor of speech, language & hearing sciences	A Non-Interactive Method for Teaching Noun and Verb Meanings to Young Children with ASD	Autism Speaks	\$118,886	\$118,886
	Toddlers' Representations of Verbs: Effects of Delay and Sleep on Verb Meaning	National Institutes of Health (NIH) (Northwestern University subcontract)	\$54,505	\$116,646
	Effects of Sleep on Word Learning in Preschoolers	Sleep Research Society Foundation	\$20,000	\$20,000
	Individual Differences in Toddlers' Abilities to Learn New Verbs from Their Linguistic Context	Language Learning	\$10,000	\$10,000
	Two-Year-Olds' Use of Linguistic Information to Acquire the Meaning of Verbs	American Philosophical Society	\$3,123	\$4,000
Helen Barbas, professor of health sciences	Organization of Prefrontal Feedback Circuits	NIH/National Institute of Mental Health (NIMH)	\$420,594	\$2,375,077
	Prefrontal Anatomic Pathways in Executive Control	NIH/National Institute of Neurological Disorders and Stroke (NINDS)	\$368,848	\$2,008,051
Helen Barbas and Jamie Bunce, postdoctoral scholar	Prefrontal and Amygdalar Pathways to Memory-Related Medial Temporal Cortex	NIH/NIMH	\$41,577	\$159,882
Helen Barbas and Clare Timbie, predoctoral student	Circuitry of Emotion: Integration in Orbitofrontal Cortex	NIH/NIMH	\$32,614	\$178,140
Jason Bohland, assistant professor of health sciences	The Online Brain Atlas Reconciliation Tool	NIH (Cold Springs Harbor subcontract)	\$26,490	\$76,501
Kee Chan, assistant professor of health sciences	Intergovernmental Personnel Agreement (IPA): MultiVISN Implementation of a Program to Improve HIV Screening and Testing	Dept. of Veterans Affairs (VA)	\$21,124	\$31,686
L. Clarke Cox, clinical associate professor of speech, language & hearing sciences	Hearing Acuity, Cognitive Aging and Memory for Speech	NIH/National Institute on Aging (NIA) (Brandeis University subcontract)	\$16,370	\$81,850
Terry Ellis, assistant professor of physical therapy	A Multifactorial Exercise Program to Reduce Falls in People with Parkinson Disease	BMC Pepper Award	\$32,400	\$64,800
	Intergovernmental Personnel Agreement (IPA)	VA	\$27,761	\$27,761
	Unveiling of the Natural History of Quality of Life and Mobility Decline in Persons with Parkinson's Disease	Davis Phinney Foundation	\$23,500	\$96,000
Marianne Farkas, director of training & international services, BU Center for Psychiatric Rehabilitation	Improved Employment Outcomes for Individuals with Psychiatric Disabilities	Dept. of Education (ED)	\$850,000	\$4,245,042

PRINCIPAL INVESTIGATOR	TITLE OF PROJECT	AGENCY/FOUNDATION	FUNDS AWARDED/ AVAILABLE 2012–2013	TOTAL AWARD
Marianne Farkas	Toolkit of Recovery-Promoting Competencies for Mental Health Rehabilitation Providers	National Institute on Disability and Rehabilitation Research (NIDRR)	\$199,714	\$599,504
Marianne Farkas and E. Sally Rogers, director of research, BU Center for Psychiatric Rehabilitation	Bringing Recovery Supports to Scale Technical Assistance Center Strategy	Substance Abuse & Mental Health Services Administration (SAMHSA)	\$61,841	\$708,521
Mahasweta Girgenrath, assistant professor of health sciences	Modulation of Inflammation and Fibrosis in the Context of Regeneration in MDC1A	Muscular Dystrophy Association	\$119,133	\$357,465
Jennifer Gottlieb, research assistant professor, BU Center for Psychiatric Rehabilitation	Improving Quality and Reducing Cost in Schizophrenia Care and New Technologies and New Personnel	Center for Medicaid/Medicare Innovation	\$244,333	\$409,022
	Internet-Based CBT for Schizophrenia: A Pilot RCT Computer-Based Program for Auditory Hallucinations	Brain & Behavior Research Foundation (formerly NARSAD)	\$21,891	\$21,891
Frank Guenther, professor of speech, language & hearing sciences	Minimally Verbal ASD: From Basic Mechanisms to Innovative Interventions	NIH	\$364,658	\$1,982,833
	Neural Modeling and Imaging of Speech	NIH/National Institute on Deafness and Other Communication Disorders (NIDCD)	\$353,515	\$1,777,490
	Sequencing and Initiation in Speech Production	NIH/NIDCD	\$330,469	\$1,703,678
Frank Guenther and Emily Stephens, predoctoral fellow	Decoding Imagined Vowel Productions Using Electroencephalography	NIH/NIDCD	\$34,139	\$101,984
Christine Helfrich, assistant professor of occupational therapy	Life Skills: Transitioning from Homelessness and Isolation to Housing Stability and Community Integration	ED/NIDRR	\$117,426	\$599,990
Kenneth Holt, associate professor of physical therapy	Smart Exoskeleton Suit—Biomechanically Synergistic Body Support and Protection System	Harvard Wyss Center (subcontract)	\$67,370	\$67,370
Norman Hursh, associate professor of occupational therapy	The City Connects Model of Student Support: Building a K–12 Student Support Practice and Process	Boston College (subcontract)	\$46,601	\$91,847
Dori Hutchinson, director of services, BU Center for Psychiatric Rehabilitation, and Margaret Ross, director of behavioral medicine, BU Student Health Services	Boston University Suicide Prevention Program	SAMHSA	\$99,230	\$293,876
Susan Kandarian, professor of health sciences	The Molecular Basis of Muscle Wasting in Cancer Cachexia	NIH/National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)	\$368,325	\$1,841,213
	Regulation of Gene Expression in Skeletal Muscle: NF-KB Signaling in Atrophy	NIH/NIAMS	\$171,620	\$1,835,850
Julie Keysor, associate professor of physical therapy	ENACT: Enhancing Activity and Participation for Persons with Arthritis	ED/NIDRR	\$799,992	\$3,999,924
Gerald Kidd, professor of speech, language & hearing sciences	Central Factors in Auditory Masking	NIH/NIDCD	\$533,202	\$2,714,796
	Spatial Hearing, Attention, and Informational Masking in Speech Identification	US Air Force	\$223,562	\$685,945