

OFFICE OF GOVERNMENT AND COMMUNITY RELATIONS

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Oakland students providing health services around the globe

On Dec. 16, 55 Oakland University students headed to Nicaragua as part of the Global Brigades-Medical team. The team visited two communities within the country in order to provide medical and public health assistance.

The group was created as part of the larger international Global Brigades non-profit. The organization provides economic and health care to communities throughout the world, mainly through university student volunteers and service teams.

Before they set out on their trip, the brigade raised funds to purchase various drugs to provide to patients in need while in Nicaragua.

The students started their trip in Las Mangas of Matagalpa for three days. During that time, they set up a system for patients to go through stations like triage, a medical examination, and then either a gynecological or dental examination. Beyond this, a station was set up for Nicaraguan children to learn about the importance of dental hygiene.

In their time at the clinic, students estimated that they served approximately 1,000 community members. The group assisted doctors and observed patients as

well as distributed proper medication.

From here, the students traveled to El Naranjo for the public health section of the trip.

Casey Kepczynski, a health sciences major, explained the work that the brigade completed while in El Naranjo.

“Our brigade was split up into three groups to build three different homes,” Kepczynski said. “The families whose homes we were building were also hard at work participating and showing us what to do.”

The three groups laid down concrete flooring, built a bathroom and a septic tank.

“I felt like I was actually making a difference by building a home for a family that would forever be grateful,” Kepczynski commented.

Students were able to work one-on-one with Nicaraguan people throughout the trip from the medical clinic to the public health work.

“As well as being a medical brigade and bringing help to people physically, I believe that we were able to bring hope and compassion,” student volunteer

and nursing major Nicole Weber said.

The trip gave students the opportunity to do real world work for their respective fields of study while giving back to those in need. A group leader, translators and the Nicaraguan doctors assisted in breaking down language barriers to make the trip as personal as possible.

“As an Oakland student, I am very proud to say that Oakland University is so positively represented in Nicaragua and that 55 students were willing to donate their time and resources to the amazing people of Nicaragua,” Weber said.

Kepczynski reflected on the trip with similar feelings of pride and gratitude.

“I hope my career one day will give me that same fulfillment,” she said. “I encourage any Oakland student to take the opportunity if they’re able to, even if they’re not going into health care.”

For more information on Global Brigades or how you can get involved, visit the Global Brigades - Medical page on GrizzOrgs or globalbrigades.org.

NEWS YOU CAN USE

Research is improving medical imaging scans for better patient care

Medical imaging systems make it possible for health care professionals to see processes within the body so they can diagnose, monitor or treat medical problems. It's a growing industry — one market research company is forecasting growth from \$30.2 billion in 2013 to \$49 billion in 2020.

Oakland University researcher Jing Tang, Ph.D., ABSNM, and her small team in the Biomedical Imaging Laboratory in the School of Engineering and Computer Science, are part of the imaging revolution that is improving diagnosis and treatment.

Dr. Tang, assistant professor in the department and director of the imaging laboratory, leads research designed to improve medical image reconstruction, evaluation, and analysis techniques. More specifically, Dr. Tang, two graduate students and a postdoctoral researcher are working on algorithms that, when incorporated into equipment software, will improve the images generated by certain imaging systems.

Dr. Tang's current research, funded by a National Science Foundation CAREER Award, involves data from the emerging and cutting-edge hybrid PET/MRI (positron emission tomography/magnetic resonance imaging) biomedical imaging system. PET imaging, she says, measures functional information in the body, while MRI imaging provides anatomical information with better soft tissue contrast than a computer tomography (CT) — scan.

The hybrid imaging system is relatively new, having received Food

and Drug Administration approval in 2011. The technology is used primarily for oncology, neurology and cardiology applications.

"Whether the two systems are used sequentially or simultaneously, the hybrid PET/MRI system gives physicians more detailed and thorough information than a single system scan," Dr. Tang says. "Most prefer simultaneous scans, but even with both options in place, there are more technical difficulties to overcome," she adds.

Collaborating with OUWB School of Medicine

Dr. Tang's research into how to improve the images generated by the hybrid imaging systems involves close collaboration with Oakland University William Beaumont School of Medicine physicians.

"They are our real-world connections," Dr. Tang says. "They tell us what kind of image problems they would like us to solve and we develop algorithms to address them. For example, a doctor might say there are artifacts in certain areas of the images, and ask us to find a solution to that problem."

The work involves determining how to overcome obstacles involved with forming the image as well as how to make the most of the integrated data generated by both imaging methods — PET and MRI.

"The images generated by the data collected in the scans are already very good," Dr. Tang notes, "but there's room for improvement. For example, organ movement and signal loss when traveling through the body both have an impact on the resulting image that physicians study. How can we overcome those issues?"

The goal, she says, is to use modern techniques to extract more

information from the data to create even higher quality images. The work could, ultimately, contribute to providing patients with personalized medicine.

"The better the image, the better able physicians will be to see what's going on and decide on the best, most targeted treatment," she says.

Sharing developments

The research results will eventually get translated into code that will be incorporated into medical imaging equipment software.

More immediately, the team's research results are shared in medical specialty conference papers and presentations.

Dr. Tang also received funding through the National Science Foundation's Broadening Participation Research Initiation Grants in Engineering to reach and engage historically under-represented minority students. Working with undergraduate students, she created and presented to Detroit-area high school students the "I See You" workshop on biomedical imaging.

"We want to interest underrepresented students, including young women, in engineering careers in general but also in biomedical engineering and biomedical imaging careers specifically,"

Dr. Tang says. "We've recently been able to collaborate with the School of Engineering and the School of Medicine, so we have a greater variety of presenters and presentations."

As Dr. Tang continues her research to improve the images generated by hybrid PET/MRI technology, she remains focused on her end goal: Better care for patients.

STATE AND NATIONAL HEADLINES

State Budget Surplus Sparks Hopes for Higher-Education Funding Restoration

November marked the 11th straight month that Arizona's revenue has exceeded what was forecast in the state budget. That's led some elected officials to discuss the reinstatement of more than \$99 million cut from the state's three universities last year. Arizona Public Radio's Ryan Heinsius reports.

The Joint Legislative Budget Committee's most recent report shows Arizona was more than 200 million dollars in the black for November.

Flagstaff Representative Bob Thorpe, the chairman of the Government and Higher Education Committee, says he'd like to funnel some of the state's surplus back to higher education this year.

"What I will be asking for is that we get the full \$99 million restoration ... It had a huge negative impact for NAU, of course," he says.

Northern Arizona University lost more than \$17 million and 60 jobs to the budget cuts.

Even though Arizona's economy has improved, Thorpe is still uncertain of how many of his colleagues would support the restoration of university funds.

"I don't know where the governor stands at this point; I really don't know where leadership stand at this point as far as higher-educational funding," he says.

The balance of the state's general fund is now about \$1.5 billion. The JLBC says much the revenue gain came from boosts in sales, individual income and corporate taxes.

KNAU
January 7, 2016

NY: New York state to cover student loan payments for recent grads

The New York state "Get On Your Feet" student loan relief program—which pays two years of federal student loan payments for college graduates who are legal New York residents—began accepting applications on December 31.

In order to be eligible for the program, students must have graduated from or received a high school equivalency diploma from a New York high school and earned an undergraduate degree from a New York college or university beginning in the 2014-15 academic year. Recipients must also earn less than \$50,000 a year and be enrolled in a federal Income-Based Repayment plan or Pay as You Earn plan.

Supporters tout the initiative as one that will encourage graduates to live and work in the state as well as boost the economy. So far, 2,500 graduates from the Class of 2015 have registered to apply for the program; more than 24,000 recent graduates are expected to participate once the program is fully implemented in 2020.

Big News Network
December 30, 2015

Proposed Funding Increases for California Colleges and Students

California Governor Jerry Brown on Monday proposed \$1 billion in new funding for the state's public institutions, an increase of 3.4 percent. (Roughly \$590 million of that amount would come from the state's general fund.) The total of \$30 billion in state support for higher education would be an increase of 30 percent since 2012, when California emerged from years of deep, recession-driven budget cuts. Brown warned, however, that the salad days tend not to last long.

"The state's short periods of balanced budgets have been followed by massive budget shortfalls. In fact, the sum of all the deficits during this period is seven times greater than the sum of all the surpluses," the budget proposal said.

The budget is structured so the University of California and California State University systems could keep their tuition levels flat for another year. Last year Brown struck a deal with UC to prevent tuition hikes.

UC, which is the most selective of the state's three systems, would receive the largest increase under the proposal -- \$174 million, or 5.4 percent. Cal State would get \$152 million, or 4.6 percent, in new funding. The state's community colleges would see an increase of \$376 million, or 4.4 percent.

Brice Harris, the community college system's chancellor, said the proposed money would increase access to community college for almost 50,000 new students.

"The governor's plan also includes a commitment to improve and expand our efforts to build a stronger workforce to meet the demands of our state's economy, improve remedial education and help close achievement gaps," he said, in a written statement.

Inside Higher Ed
January 8, 2016

Higher ed commission program encourages college dropouts to return

Indiana's colleges and universities want to get dropouts back to class. More than 750,000 Indiana residents—or about 22 percent of the state's working-age adults—



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State and National Headlines *CONTINUED*

have attended some college but quit before completing their degrees.

They may have left because of work or financial problems or family obligations. The reasons are countless.

But now, state higher education officials are working with schools to make it easier for those Hoosiers to finish their degrees.

They're advocating that financial incentives, flexible schedules and other perks be made available to adults that need the help, with the hope of creating a stronger, more educated workforce and helping Hoosiers advance their lot in life.

"They're thinking about child care, shifts at work, and we need to make sure we've removed obstacles to them along the way," said Higher Education Commissioner Teresa Lubbers. "Our goal is to say, 'Yes, you left, but there are all kinds of reasons why you're a different person now and it could be a good time to come back.'"

The state has set an aggressive goal: Lubbers wants to see 200,000 of those adults earn degrees by 2020.

Indiana Business Journal
January 2, 2016