



GlobeMed at the University of Chicago and partner ASPAT-Perú awarded CAD \$112,000 to combat Multi-Drug Resistant Tuberculosis in Peru

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In October 2014, GlobeMed at the University of Chicago and its partner organization, Asociación de Personas Afectadas por Tuberculosis del Perú (ASPAT-Perú), were awarded the Grand Challenges Canada Stars in Global Health grant, valued at CAD \$112,000, to develop and pilot the first biometric patient tracking system in Peru for tuberculosis (TB) patients. The system, entitled Sistema Biometrico de TB (SisBioTB), was recognized by the Canadian government and Peru's Consejo Nacional de Ciencia, Tecnología e Innovación Tecnológica (CONCYTEC) as a project with the potential to revolutionize the fight against multidrug-resistant tuberculosis, MDR-TB, in Peru.

In Peru, TB is a disease that mainly affects the poor and involves heavy stigmatization. Patients frequently face discrimination from employers, community members, friends, and sometimes even family. This discrimination often translates into unemployment, which exacerbates the pressures of poverty, making it difficult for TB patients to adhere to their 6-month long antibiotic treatment and causing patients who are unable to complete it to develop MDR-TB. Peru currently experiences the highest relative incidence rate of MDR-TB in South America, a disease that affects around 480,000 people worldwide according to World Health Organization estimates, and is associated with a mortality rate of about 50% (Ministerio de Salud del Perú).

The goal of SisBioTB is to reduce patient non-compliance by improving the Peruvian healthcare system's ability to track each individual TB patient's compliance to treatment in real-time and to intervene as early as possible. In Peru, TB patients receive their free daily dosage of antibiotics from the nearest public health center. Their attendance is taken down by hand, and patient records are kept in paper form within each health center. With SisBioTB, patients enter their fingerprints into the biometric scanner daily after taking each dose of medication. If they miss their morning treatment, an alert is sent to their mobile phone to remind them to come in for their daily dose; if they do not take their medication by the end of the day, their community health worker, or *promotor*, is notified and goes to the patient's house that same day to check on them.

This project was inspired by a similar biometric tracking system called eCompliance, an intervention developed by Operation ASHA, an NGO whose Co-Founder and CEO is Dr. Sandeep Ahuja, an alumnus of the Harris School of Public Policy. Operation ASHA first developed and implemented the eCompliance biometric tracking system in India, and has since expanded to Cambodia, Uganda, the Dominican Republic, and Kenya. eCompliance has proven incredibly effective in these countries by reducing patient non-compliance rates from ~10% to 3% or less. Impressed by the results, ASPAT-Perú and GlobeMed decided to adapt the intervention to a Peruvian context with Operation ASHA's assistance and advice. With the Grand Challenges Canada Stars in Global Health grant, ASPAT-Perú and GlobeMed are implementing a similar biometric tracking system in thirty public health centers in

Lima administered by the Peruvian Ministry of Health (MINSA) in the hopes of scaling-up the intervention across the country in 2016.

SisBioTB is currently undergoing software testing under the guidance of CONCYTEC and MINSA. Once the system is fully developed, ASPAT-Perú will implement the pilot program beginning in May 2015. If successful, SisBioTB will provide an exciting example of how innovative practices in global health can be transferred between different countries. It will also stand testament to how universities and students can play meaningful roles in global health through long-term partnership with community and public health organizations around the world.

About GlobeMed and ASPAT-Perú: GlobeMed at the University of Chicago is a student-run organization that is engaged in a long-term partnership with the Asociación de Personas Afectadas por Tuberculosis del Perú, a community-based health organization for TB patients that fights to end discrimination against the disease and expand patient access to treatment. Together, they develop and fund projects that empower patients to recover from TB in a prompt and dignified manner with the broader aim of eliminating social stigma against the contraction, diagnosis, and prevention of tuberculosis. These projects include modular housing, micro-business seminars, food baskets, seed funding for TB patients, and an upcoming breakfast program that offsets the negative side effects of TB regimens and incentivizes the continuation of treatment.

For more information about GlobeMed at the University of Chicago, ASPAT-Perú, and the Grand Challenges Canada Stars in Global Health, please visit <https://www.facebook.com/globemeduchicago> and <http://www.grandchallenges.ca/wp-content/uploads/NewsRelease-ConcytecGCC-2014Oct23-EN.pdf>

For more information on Operation ASHA's eCompliance system, please visit <http://www.opasha.org>.