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Sandeep Ahuja, MPP '06, fights TB in India's slums.

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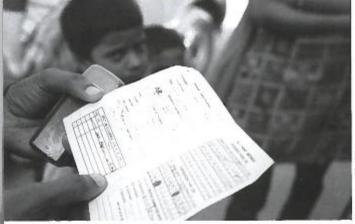
DOC HUNT

Sandeep Ahuja, MPP'c6, finds innovative ways to track
and treat impoverished TB patients in India's slums.

At age 42, Sandeep Ahuja left his career with the Indian government to become a full-time policy student. By the time he graduated two years later, Ahuja, MPP'06, had founded a nonprofit that could change the delivery of tuberculosis treatment worldwide.

"I learned everything the government had to teach me," Ahuja says of his decision to get a degree from the University of Chicago Harris School of Public Policy. "After being taught by these professors, there was no reason I couldn't change the world on a bigger scale."

Based in a small office in Delhi, Operation ASHA—its name means Operation HOPE in English—has since grown into the largest organization fighting tuberculosis in the country. Today it serves a population of 4 million disadvantaged people in India, enrolling more than 8,000 patients each year. Its methods, which involve community-based treatment centers and an innovative way to track patients, produced the region's best record in keeping TB patients on their lifesaving treatment, leading the Stop TB Partnership (a World Health Organization affiliate) to select OpASHA as one of its model programs in 2009.

A highly contagious disease, tuberculosis remains among the worst infectious killers of adults worldwide, taking almost 2 million lives every year. According to WHO data, about 20 percent of cases occur in India alone, despite the fact that TB is fully curable, and free antibiotics are available from the Indian government.

"As far as the government is concerned, slums don't exist," Ahuja says, describing the difficulty of getting medication to the country's poorest areas. "And there are hardly any qualified physicians who are willing to work in the slums, because living conditions are awful and there's no money to be made."

Ahuja, who worked in the government's Ministry of Finance, Customs Office, and the Indian Revenue Service, has volunteered in these slums for more than a decade. In 1998, he started working with Shelly Batra, a physician who was performing *pro bono* surgeries in Delhi, by helping her raise funds for recurring costs—about $100 per operation. Years later, by shifting their focus to providing TB-only treatments, Ahjua and Batra have lowered their aid efficiency to $25 per life saved, he says.

"It's as though he did a cost-benefit analysis," says Duncan Snidal, a Chicago Harris professor who taught Ahuja's political economy class and now sits on the board of OpASHA. "There was a problem, there was a gap not being filled by the government, and it also turned out to be the most effective way to save lives in India."

With a lack of trained physicians in the slums of Delhi, tuberculosis patients often have little choice but to visit unlicensed doctors with little or no medical training. Ahuja and his team, which has grown to include 140 employees, have partnered with these faux physicians and members of the

city's poorest communities to provide adequate care, offering them financial incentives for facilitating proper TB treatment.

Based on the WHO-endorsed Directly Observed Treatment strategy, an average OpASHA clinic—housed in storefronts, homes, and Hindu temples—includes a "provider," a member of the local community who offers physical space for the treatment, and a "counselor," a full-time OpASHA employee who administers the medication.

"We are getting many more patients than we would if we did not utilize these people in our system," Ahuja explains. "And their reputation and prestige in the community goes up because they're tied to our organization."

As a result, OpASHA's TB detection rates are 80 percent higher than other nonprofits in the same region, says Ahuja.

A common challenge, however, is getting patients to finish treatment, since TB medication requires the patient to take up to seven pills at a time on a strict schedule of three days per week over a six- to ten-month period. TB drugs also have uncomfortable side effects like vomiting and acidity, even after symptoms start to dissipate. "After eight weeks, the patient feels absolutely fine," Ahuja says. "Why should he keep coming?"

When patients don't complete their treatment, however, fatal drug-resistant strains of the disease can form and spread, especially among people living in close quarters. The length of drug-resistant treatment jumps to three years and can cost patients up to $5,000, Ahuja explains.

To address this problem, OpASHA and a team of researchers from Microsoft Corp. developed a low-cost biometric program that tracks patient progress and alerts counselors when patients are skipping treatment. When a patient comes in for medication, they have to scan their fingerprint on a computer, which records the visit. If a patient misses a

"A Game-Changer for TB around the World"

dose, and no fingerprint was taken, an OpASHA counselor is alerted via text message. Those counselors, whom OpASHA pays, are given 48 hours to locate their patient, administer the medication, and get an electronic fingerprint as proof of the transaction.

"There's no rocket science that we had to invent," says Bill Thies, a researcher for Microsoft Research's Technologies for Emerging Markets Group, discussing the biometric software he helped design for OpASHA. "It was more of a novel application and collection of things that previously existed."

OpASHA started using this software—it runs on basic off-the-shelf laptops, fingerprint scanners, and cell phones—a year ago. In that time, it lowered observed patient default rates from 2.75 percent to 0.5 percent, compared to the 11.75 percent average of other nonprofits in the same area. Ahuja says that's one of the lowest rates in the developing world.

He says the software also could have wider implications for how nonprofits deliver services around the globe. His organization already has expanded to Cambodia and plans to start consulting in African countries soon.

Last November, after a presentation at the mHealth Summit in Washington, DC, OpASHA was selected out of more than 200 presenters to have a private discussion with Microsoft founder and philanthropist Bill Gates about the software, which will be made available for public download from the company's website this year.

"We knew this would be a game-changer for TB around the world," Ahuja says. "Soon nonprofits everywhere will have access to this technology." ∎

Sandeep Ahuja, MPP'06
Founder and CEO
Operation ASHA