

Threatened Hope — PEPFAR and Health in Africa

Palav Babaria, M.D., M.H.S.

Cows, chickens, and patients lounged outside the clinic in the blistering heat of a waning South African summer. From the window, I watched them gravitate to the shade of a giant jacaranda tree. The electricity was out for the fourth time that morning, and beads of perspiration dotted our bodies as we waited. It would be hours before the x-ray machine, lights, and air conditioner returned to life.

“Doctor, you have another patient,” the nurse announced, though I was neither a doctor nor supposed to be seeing patients. I was a fourth-year medical student posted to a rural district hospital for a research project. Titles were inconsequential to the local nurses, who sought anyone who might help control the tide of patients.

The nurse ushered Mr. C. into the exam room. He was clearly a man aged by his life circumstances: deep depressions etched his temples, darkened skin clung to his ribs. He carried an oversized fluorescent-yellow duffle bag shaped like a sneaker; it would help me identify him months later and hundreds of kilometers away.

Mr. C. was like most of the clinic’s patients: malnourished, frail, and breakable but with a tenacity that had sustained him through his diagnosis of HIV infection and his first bout of tuberculosis several years earlier. He lived with seven family members in a single-room rondavel and searched unsuccessfully for work in an area where unemployment approached 80%. Many

young men like Mr. C. headed to Durban for work and returned to their families once a year, some arriving with end-stage AIDS. It was telling that the nicest building in town was the funeral home; located next door to the district hospital, it had polished windowpanes and fluorescent lights that illuminated an array of mahogany coffins.

Since receiving his HIV diagnosis, Mr. C. had faithfully trekked to the hospital every month to collect his antiretroviral medications. He diligently took his pills every morning and evening, convinced that they would allow him to live into middle age. He was not dying, so he did not think to ask to see a doctor. And the swamped doctors did not think to see him.

Only when he had moved beyond the last buckle hole on his belt and his trousers refused to be held up did Mr. C. request a doctor visit. Instead, he got me.

Why was he losing weight? He had no other symptoms. I looked through his chart for clues, but it was blank, save for five pages of monthly receipts documenting his visits to obtain refills. There were no recent notations of viral load or CD4 cell counts. When the electricity returned, I ordered a chest x-ray, which showed clear infiltrates consistent with tuberculosis. When I told Mr. C., his face fell — he couldn’t understand how, given how carefully he took his medication, he could have acquired tuberculosis again. He asked whether it might be multidrug-resistant (MDR) or extensively drug-resistant (XDR) tuberculosis, mentally calculating

his odds. In places like this, a quarter of tuberculosis cases were MDR or XDR, and first-line tuberculosis regimens usually failed.

I had no concrete answers but handed him a cup to spit in. The sputum sample would travel to Durban for culture and resistance testing. I assured him that in time, we would know. As per South African guidelines, Mr. C. started a standard four-drug tuberculosis regimen and went home.

I saw him in clinic 1 month later. He had started coughing up blood-tinged sputum. He was weak, tired, miserable. His sputum smear was positive for tuberculosis, so I assured him that he should soon start to feel better.

But I was wrong. Two and a half months after Mr. C. had submitted his sputum sample for culture, his resistance test results arrived. He had XDR tuberculosis. We called him to come to the hospital, but he had already spent nearly a quarter of his income to come to the clinic a few weeks earlier and wouldn’t have more money for several weeks. Days later, the tuberculosis team arranged to pick him up, and he was transferred to Durban to begin his treatment. And so, almost 3 months after tuberculosis was first diagnosed and probably many more since the start of his illness, Mr. C. finally received the right medications.

Three months later, my research project took me to Durban’s tuberculosis referral hospital. I knew Mr. C.’s treatment would last at least 12 months, so I slowly climbed each flight of steps, asking nurses at each sta-

tion if they'd seen him. My stomach was knotted with anticipation: mortality from XDR tuberculosis was over 90%.

But on the fifth floor, in a corner cot on a ward lined with patients in blue hospital gowns, I spotted a familiar fluorescent-yellow sneaker. I had found him. Mr. C.'s pupils widened over the rim of his blue mask. Tears flooded both our eyes at the improbability of the situation — somehow, against the odds, the system had worked. Mr. C. had cheated death and looked well; he was eating and had gained weight. I visited him once more before he finished his treatment. He was barely recognizable — his face had filled out, and his skin glowed. I reassured myself that there was some value left in hope.

Until the 2003 creation of the President's Emergency Plan for AIDS Relief (PEPFAR), HIV infection had been a death sentence in South Africa. Since then, millions of patients there and around the world have begun taking lifesaving medications, and millions more have been tested for HIV. Antiretroviral therapy (ART) provided to HIV-positive pregnant women has protected more than 300,000 newborns against new infections. But more broadly, PEPFAR funds have been

used to repair crumbling clinics and hospitals and train thousands of health care workers.

PEPFAR has succeeded partly because it has benefited the entire health care system in ways that vaccination drives, maternal health initiatives, and other public health interventions hadn't done. Addressing defects and holes in Africa's overall health systems, PEPFAR funded training for 140,000 new health care workers and the development of programs that used peer educators and community health workers to diagnose and treat patients with HIV at hard-to-reach rural sites. It was because of PEPFAR that Mr. C. could undergo testing, be picked up at home and shepherded to the district hospital, and survive XDR tuberculosis. In less than a decade, PEPFAR has created health care systems in regions where people had never even seen a doctor.

Now PEPFAR is at risk, as investments in AIDS give way to other global health priorities — a shift supported by some in the global health community who fail to recognize that the systems delivering ART also permit expansion of primary care, chronic disease treatment, and maternal and child health care services. I believe that rather than representing one side of an either-or

dilemma — costly ART versus babies dying of diarrhea — PEPFAR could become a platform for improving health and health care systems in developing countries. There is nothing unique to HIV about delayed diagnoses, failures in patient monitoring, and the challenges of triage, testing, and transportation. Just as PEPFAR funding helped save Mr. C.'s life, its expansion could ensure the survival of his brother with hypertension and his sister with early cervical cancer. Perhaps innovative financing ideas to fund new aid, such as the "Robin Hood tax" (a proposed small financial-transaction tax that could generate billions of dollars of revenue), could be used to support such expansion.

Mr. C.'s outcome resulted from our government's willingness to translate our hope into meaningful programs. Now I believe we have two options: improving the clinic further . . . or backtracking to the funeral parlor next door.

Disclosure forms provided by the author are available with the full text of this article at NEJM.org.

From the Department of Internal Medicine, University of California, San Francisco, San Francisco, and the Department of Medicine, Highland Hospital, Oakland, CA.

DOI: 10.1056/NEJMp1301649

Copyright © 2013 Massachusetts Medical Society.

BECOMING A PHYSICIAN

Training Physicians to Manage Obesity — Back to the Drawing Board

James A. Colbert, M.D., and Sushrut Jangi, M.D.

According to the Centers for Disease Control and Prevention, nearly one third of U.S. children and about two thirds of U.S.

adults are overweight or obese (see map) and therefore at increased risk for hypertension, diabetes, and musculoskeletal disease. If the

trend continues unchecked, half the adults in the United States may be obese by 2030. Although a few clinics specializing in weight