A Cure for Poverty: A Profile of Community-Based Healthcare

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Stop! Let's carry her out of here," I shout at my American friends pushing a wheelchair carrying Aurea, a 16-year-old pregnant Timorese woman. Aurea has just been admitted to the general ward of Bairo Pite Clinic for abdominal pain. She has been experiencing increasingly severe pain in the past hour. We need to get her to the maternity ward as quickly as possible. We place her in a rusty black wheelchair and navigate through the clinic's gravel parking lot. She presses her fist into her abdomen and squints her eyes, screaming with agony. Suddenly she loses consciousness, her body slumps, and her head collapses. I quickly grasp her shoulder and stabilize her head as my friends rush the chair forward.

Blocked by a sewage gutter laying across the ground, I realize we cannot go any further. I yell at my two friends, also college summer volunteers, that we need to carry her the rest of the way.

It is just another day at the busy Bairo Pite Clinic in East Timor. Aurea was one of more than 500 patients waiting that morning for a free medical consultation by the clinic's founding director, Dr. Dan Murphy. Situated in Dili, the capital of East Timor, Bairo Pite Clinic serves a community where more than 41 percent of the population lives below the national poverty line of 88 cents a day.[1] Facing challenges of limited resources and staff shortages, the clinic has difficulty caring for all its patients. The clinic therefore turns to volunteers from around the world to address some of these needs. As a pre-medical student from the United States, a country that spends over $2.3 trillion yearly[2] in healthcare, I came to Bairo Pite Clinic to gain a new perspective on healthcare in a developing country. Particularly, I wanted to know how a rural healthcare clinic with a monthly budget of merely $25,000[3] can manage to provide healthcare effectively for East Timor's underprivileged population.

As I walk among the Timorese patients in stained shirts and muddied sandals, I recall my own experiences growing up in rural Thailand. I remember wheeling crates full of home-grown mangoes to sell at a local market in northern Thailand when I was 10 years old. I remember helping my grandfather distribute donated medicine to fellow farmers after a Buddhist service. These instances help me understand the living conditions of patients at the clinic and allow me to see how a small act can have a significant impact in a community.

My passion to become a physician and make healthcare accessible to underprivileged populations of all nationalities is rooted in these experiences. It is the desire to see that connection that brought me to East Timor, where I dedicated my summer to volunteering at Bairo Pite Clinic.

This internship has taught me invaluable lessons. Through my encounter with various people at the clinic, I learned about the clinic's structure and witnessed the uniqueness of the community it serves. From working with Timorese volunteers to helping Antonio, a rehabilitating stroke patient, I learned about the practice of community-based healthcare. By helping Dr. Dan care for Mary, a patient with tuberculosis, I identified the challenges and importance of a physician's moral code. After spending time with Agusto, a patient diagnosed with schizophrenia, I learned the value of compassion in health treatment. Finally, by helping a Timorese volunteer search for Lola, a patient with heart disease, I witnessed the importance of persistence. Through interactions

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with these people, I came to identify three core attributes that make Bairo Pite Clinic successful in delivering high-quality healthcare to its underprivileged community: a strong sense of moral duty, a sturdy emphasis on treating patients with compassion, and an unyielding persistence to care for its community.

Bairo Pite Clinic

An old man swings open the large red gate of the clinic. "Bon dia," he greets me as he empties an old paint bucket containing used gloves and gauze into a trash dumpster by the clinic entrance. *Good morning.* On a graveled open space behind the main gate is a small child, no more than five years old, pedaling a rusty blue bike. The tires of the bike sway left and right as his sister pushes him forward, laughing. Behind the kids, underneath a mango tree a vendor is setting up a table of fried bananas, crackers, water and juice. Across from the snack stand is the main clinic building, a one-story, high-ceiling structure with chipped sky-blue paint. A stainless steel rooftop extends out beyond the front of the building, providing shade for the wooden benches beneath.

Crowding the wooden benches are Timorese patients from all districts of East Timor. A young mother hums songs as she breastfeeds her infant. A grandmother wearing a traditional Timorese skirt sits quietly chewing a fruit called betel nut. Standing by the front door is a young man I recognize from a nearby Indonesian restaurant. Adjacent to the main waiting area is another line of patients seeking emergency care. I can still hear their voices from far away. A woman screams in pain from a cooking oil burn on her thighs. A child cries as blood runs down from a cut on his forehead. Everywhere I look there is chaos. In every direction there are sick people in desperate need of help, all here to see Dr. Dan.

Dr. Daniel Murphy, or simply "Dr. Dan" to his patients, is a 68-year-old white, American physician from a small farming community in Iowa. He came to East Timor in 1998 when political riots and military crackdowns wracked the country under Indonesian rule.[4] A Timorese guerilla resistance had fought against the government for freedom since 1975.[5] The intensity of the conflict escalated, resulting in more than 18,600 people killed in the violence and more than 143,700 additional deaths due to hunger and illness.[6] Dr. Dan volunteered at a church clinic tending to the wounds of the Timorese victims. Several months later Dr. Dan was blacklisted and expelled by the Indonesian government for supporting the Timorese effort.[7] In August 1999, an overwhelming majority of Timorese citizens voted for independence. In response, Indonesian militias commenced a scorched-earth campaign, destroying the majority of the country's infrastructure, killing over 1,400 Timorese and displacing more than 300,000 people.[8] Troubled by a strong sense of unfinished obligation, Dr. Dan searched for every opportunity to go back to East Timor.[9] He could not rest knowing that hundreds and thousands of Timorese were being murdered and separated from their families. Finally, Dr. Dan managed to go back to East Timor with the assistance of the United Nations military. In a context in which medical supplies were looted, equipment damaged, and the majority of healthcare staff had fled the country, Dr. Dan established Bairo Pite Clinic.

Although Dr. Dan is the sole primary care physician in the clinic, he is assisted by a team of Timorese nurses and staff. A nurse in the clinic is paid US $160 a month,[10] and works on a rotation basis, with one nurse caring for about 40 inpatients at any given time, day and night. Along with paid staff, the clinic has about 20 young unpaid Timorese volunteers who help with a range of clinic operations as they experience the practice of medicine for their community. Every day these local volunteers rotate through various departments of the clinic. They learn to fill prescriptions at the pharmacy, help Dr. Dan assess patients in his office, monitor patients with a nurse, change wound dressings at the emergency room, and care for patients in isolated villages with a mobile clinic team.

By teaching volunteers about various medical cases and assigning tangible tasks for them to complete, Bairo Pite Clinic inspires these young Timorese students to take part in community-based healthcare. Putting Timorese volunteers and staff at the core of the clinic operation, Bairo Pite Clinic empowers the local Timorese people to provide healthcare for their own community.

Community-Based Healthcare in Practice

As I walk into the general ward with Maria, one of the clinic's volunteers, I see a middle-aged man, Antonio, lying down and staring at a wall in the corner of the room. His left arm and leg are paralyzed by a right hemisphere stroke. I do not have any medical expertise to treat patients, nor do I have the language or cultural knowledge to communicate with the Timorese people. What can I effectively do for Antonio?

"Bon dia," I greet Antonio and his wife, who is sitting on a red plastic chair at the end of the bed, forcing a smile at me as she wipes away her tears. Antonio shifts his gaze away from me to hide his eyes from mine. The dampness of his cheeks expresses his frustration and sadness about his inability to move. Maria explains that just a few months before, Antonio was the head of his household, a proud Timorese man who brought in the income to support his family. Now, he can only sleep on a bed in a clinic, feeling helpless and disabled.

I slowly help him sit up straight. I place his right hand on his chest, look into his eyes and tell him that it is important to take care of his heart too. After Maria finishes translating, Antonio nods his head slightly but avoids my eye contact. I realize that Antonio needs emotional support and positive encouragement. I lift his lifeless left arm up in the air shouting "up" out loud and do the same for the downward motion. Antonio looks at me with disbelief as I keep yelling "up" and "down" with each movement. Maria and Antonio's wife join in the shout. Kids stop chasing their cousins as they shift their attention to an entertaining show by a foreigner. Other patients on the surrounding beds and their family members turn to stare and chuckle at our exaggerated movements. By the end of the first set of 10 Antonio starts to smile and giggle in embarrassment. The silence of the general ward is now overtaken with the echoes of our silly voices and laughter.

A few days after our first encounter, Antonio seems more active. He lifts his left arm up with his right showing me that he can do it himself. I simply watch him and count out the numbers in Tetum, the native Timorese language. For more intensive physical therapy, the clinic manager refers Antonio to one of the clinic's partner facilities nearby, a physical rehabilitation facility called ASSERT. The clinic manager, Bertha, a 31-year-old Timorese woman, hands me a US five dollar bill[11] and instructs me to grab a taxi and take Antonio to ASSERT. Antonio's left arm swings around my shoulder and his other arm rests on another man, the husband of another patient who volunteered to help. We place Antonio in the backseat of the taxi with his wife and the other man. Maria and I squeeze in the front seat.

Four weeks later, we receive a phone call from ASSERT informing us that Antonio is ready to be discharged. Concerned that Antonio may have a hard time with his mobility and doing daily chores at home, Dr. Dan sends me along with Mateus, a 33-year-old Timorese clinic ambulance driver, to survey Antonio's house just a mile away from Bairo Pite Clinic.

As we walk through a mini jungle, Antonio's wife points out the banana trees, the variety of vegetables in her garden, and the chickens she keeps in front of their home. Her young grandchildren play a marbles game on the dirt ground in front of the small wooden house, wearing only T-shirts. Walking through a handmade brown curtain over the front door, I see piles of clothes that neighbors had commissioned Antonio's wife to wash for US$90 a month. To the right is a small room where the sunlight from a two-foot window shines on a straw rug on the ground where Antonio sleeps. The bathroom is a small structure built behind the house connected by stone path. I walk through the house checking for bumps, and looking for places Antonio can grab onto to support himself. With everything in a single level and plenty of things to grab onto, I conclude that it should be safe for Antonio to come back.

Back at Bairo Pite Clinic, Antonio brushes my hands away as I offer to help him to the truck. He is determined to walk by himself. Using a tree branch as a walking stick, Antonio slowly propels his body and drags his left leg forward. A group of Timorese visitors who gather around the truck cheer as Antonio steps in and seats himself in the back. Impressed by his strong will, I give Antonio a wide smile and a thumbs up before closing the door. Mateus helps me throw a bed frame and mattress on top of the roof of the car. Bertha instructs me to give the bed set to Antonio. With Antonio and his wife, and their belongings secured in the back, we make our way towards their house.

Mateus and I carry the mattress through the grass surrounding their home and assemble the bed in Antonio's room. Antonio walks in slowly, looking around the house that he has missed for over a month. He sits down on the new mattress and gives us a smile. "Thank you," he says as his eyes become teary. I give him a Timorese handshake[12] before we depart.

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Curious about an unusually wide smile on Mateus's face, I ask him why is he so happy. "I like to help people," he says. Lifted by his answer, I promise to buy him a bottle of Red Bull, his favorite energy drink, when we get back to the clinic.

My experience with Antonio has taught me that an effective community-based healthcare approach is holistic healthcare

provided in solidarity with the patients. At Bairo Pite Clinic, patients are not only treated for their bodily conditions while they are in the facility – attention is given to improving and supporting patients' living situation in their homes. The clinic is therefore a place where even young volunteers and untrained individuals can make a significant difference in the communities they serve. This is part and parcel of Bairo Pite Clinic's mission to not only provide effective medical treatment, but also to unite the Timorese communities in their own healthcare.

Moral Code

Ostensibly, the moral duty of a doctor is to do what is best for all patients. This is a code of ethics known as beneficence. Beneficence is a part of the Declaration of Professional Responsibility, a social contract that healthcare providers take as an oath before entering medical practice.[13] However, there are instances where the moral code of beneficence is not so black and white. It is crucial for a doctor to have a clear set of moral principles to guide his decisions.

From a medical perspective, it is for her best benefit to stay in the clinic, take anti-tuberculosis drugs, eat well, and wait for the cataract replacement that she also needs. In contrast, from Mary's point of view, going home is her best medicine. The dilemma perplexes me. What action will serve the best interests of Mary?

"You're affected by your emotions!" Dr. Dan scolds me one day.

I am standing inside his office, looking down at the floor. Leaning against a medicine cabinet, my crossed arms holding Mary's chart against my chest, I take a deep breath and listen to Dr. Dan's words. I have come into his office to ask him to reconsider his medical decision regarding one of our patients, despite knowing full well that he will not change his mind.

The patient in question is Mary, an 80-year-old woman who was admitted to the clinic for tuberculosis treatment. Although Mary receives antibiotics on a daily basis, I notice that she is not doing well today. I visit her in the tuberculosis ward, an open room with 10 beds that has only two loose ceiling fans to control cross-infections. In her yellow, sleeveless shirt and red Timorese trousers, she lays on her side with her hands hugging her knees, staring blankly at the peeling blue paint on the wall. On top of a table at the end of her bed sit a piece of bread, a bowl of rice soup, some vegetables, and a cup of milk left over from yesterday.

I tell Dr. Dan that Mary insists that she won't eat until she can go home. From my experience with Antonio, I learned that understanding emotion is crucial to providing effective patient care. In Mary's case, I believe that sending her back home to her children and grandchildren will give her the emotional support needed to improve her health. This idea is quickly turned down as Dr. Dan challenges my naïve understanding.

"If I let her go home she will die," Dr. Dan tells me.

Dr. Dan sees more than 500 patients daily, and by the time I came to volunteer at the clinic, he had seen well over a million Timorese people. His experience has taught him that when he lets patients like Mary go home, they usually do not survive. With limited medical knowledge, I have little weight on my side of the argument. I bite my tongue and listen to what he has to say.

Dr. Dan explains that Mary's ailment is easily treatable with antibiotics. From a medical perspective, it is for her best benefit to stay in the clinic, take anti-tuberculosis drugs, eat well, and wait for the cataract replacement that she also needs. In contrast, from Mary's point of view, going home is her best medicine. The dilemma perplexes me. What action will serve the best interests of Mary?

As I walk out of his office, I try to understand Dr. Dan's standpoint. Still believing that what Mary needs most right now is emotional support instead of medical interventions, I question his concern for his patients' feelings.

Walking towards the tuberculosis ward, I recall the morning rounds when Dr. Dan visited Mary for the first time. She was sitting up with her head down. The corners of her mouth were drooping, displaying sadness and despair. Dr. Dan approached her slowly and sat down right next to her on the bed. He greeted her, tapping a patient chart gently on her shoulder. He said something to her in Tetum, which I did not understand, but it made Mary giggle and smile. He held her right hand and rubbed her shoulder before turning to the medical volunteers who followed him.

I still remember him saying, "I'm trying to put a little humor in her life. If you can't laugh, what's left?"

I can imagine that making the decision against Mary's will was not easy for Dr. Dan either. It must sadden him to see the suffering that she is going through when he only wants to make her better.

Despite the painful experience, Dr. Dan must hold true to his decision in order to save Mary's life. Such a difficult moral obligation is nothing new for Dr. Dan. It is a familiar thorny path he follows to uphold his medical ethic of beneficence.

In 1999 when East Timor was in ruins, with Indonesian tanks razing the streets, Dr. Dan worked underneath the roof of Bairo Pite Clinic saving the lives of the victims of the atrocity. Gunshots were constantly fired, houses were burned, body after body was dumped into rivers; and military helicopters flew overhead.[14,15,16] Despite the danger surrounding his work, Dr. Dan remained in East Timor to help the Timorese people.

As I sit down on a wooden bench overlooking the tuberculosis ward, with Mary's chart on my lap and a green stethoscope curled around my neck, I think about Dr. Dan's words again.

"It's not that we think we can do everything perfect for everybody, but no one else is doing it, so we have to try to address whatever problems come our way," Dr. Dan explains.

Dr. Dan prescribes Mary medication to improve her appetite. Over the course of a few weeks, Mary starts to eat more and take antibiotics, and gradually her health improves. On her last day at the clinic before going back home I see her sitting up on her bed cheerfully eating bananas. The success of Mary's treatment demonstrates the importance of a physician's moral code.

Beneficence, the ethical value of taking action in the best interests of patients, is not simply defined as following the wishes of patients. It is complicated by a disparity between patients' and physicians' understanding of health, as well as injustices in the political and economic systems. Healthcare providers possess great responsibility to use their knowledge and authority to advocate for the rights of their vulnerable patients. The ethic of beneficence is a core principle of the community-based model of Bairo Pite Clinic. As Dr. Dan puts it, when needs arise, community-based healthcare does "Whatever is best for the patient. That is the bottom line."

Compassion

"Right here!" a kid yells at me in Tetum, hoping that I will pass him the soccer ball I have in my possession. Exhausted and covered in dust, I pant uncontrollably as I walk the ball slowly towards the center of the field. I am helping Bairo Pite Clinic by playing soccer with a patient.

Guarding my opponent's net is Agusto, a 24-year-old Timorese man. Agusto may be my patient from the clinic, but he is also my friend. Ignoring small children who barely reach my shoulders in height, I advance the ball forward and wind up for a shot. *"Umph!"* My left foot slips on the fine dust, my center of gravity shifts, and I collapse on the ground making a glorious thud.

Agusto rushes towards me and bursts out laughing. Although it is shameful to slip on a soccer ball in front of the little kids, I am secretly pleased that I can get Agusto to laugh.

Just two weeks ago, a clinic ambulance responded to an emergency call from a village in the country's southern mountains. After a six hour ambulance ride, Agusto was brought to Bairo Pite Clinic. Metal chains that weighed no less than 10 kilograms (22 pounds) tied his limbs together. For the past two months, Agusto had been chained inside a room to prevent him from scaring his neighbors with bizarre behaviors: staring inappropriately, talking incomprehensibly to himself, and shouting irrationally at other people.

Not knowing what to do to stop his "craziness," Agusto's family sought help from the clinic. Dr. Dan admitted him to an isolation room to avoid further humiliation from bystanders. Agusto sat on the edge of a bed with his head down, not making eye contact, not speaking a word, and not cooperating. Dr. Dan asked the family to get rid of the chains, but the family hesitated. Seeing Agusto in shackles takes me back to my childhood.

"It's not that we think we can do everything perfect for everybody, but no one else is doing it, so we have to try to address whatever problems come our way," Dr. Dan explains.

"Be careful, he is crazy and dangerous," my grandmother warns me of my great uncle, who lives in a separate room where we store the sandalwood we sell for a living. Her warnings only make me, a curious eight-year-old in rural northern Thailand, more inquisitive. I tiptoe through the damp and dark storage area. My eyes lock on a small room lit by a ray of sun that passes through a broken, two-foot window at the end of the hallway. I get closer before I suddenly need to halt.

A giant man swings the door open. My heart beats faster as I realize this must be the "dangerous great uncle" I've been warned about. Terrified, I inhale sharply and keep still. Sweat drips down my body as I stare at the monster that I am sure is going to take my life. To my surprise, he turns right and walks towards a table set up by the broken window. He paces back and forth between the table and the door to his room, continuing the pattern like a song on repeat. He mumbles something I cannot hear and stares around aimlessly. Unsure what to think, I slowly move my feet backward and retreat from the danger I believe I've just been introduced to. Seeing Agusto today, I realize that my great uncle struggled with the same illness.

Green stethoscope around my neck, I nervously enter Agusto's room. I observe Agusto's lifeless form: thin, dark and depressed. He does not respond to me. His eyes are filled with sadness as he looks down to the chain attaching him to the bed.

"I want you to give him special attention, be compassionate, try to bring him back to human life," Dr. Dan assigns me. I stand frozen in front of the patient Dr. Dan just diagnosed with schizophrenia. I struggle to collect myself. Burdened by the memories of my uncle, I wonder how I can possibly help Agusto.

Like many patients with schizophrenia, Agusto has symptoms of psychosis: loss of touch with reality, disorganized speech and behavior, and inability to socialize normally with other individuals in society. Surveys of mental illnesses indicate that "insane persons are viewed as more dangerous, insecure, unpredictable, bad, tense and foolish."[17] As a result of his illness, Agusto has been subjected to much undeserved scrutiny and derision. Schizophrenia and other mental disorders account for five of the 10 leading causes of disability worldwide.[18] Having no prior experience with schizophrenic patients, I feel that I am not well equipped to help Agusto. Still, if no one does anything for him, Agusto will become just another statistic.

Green stethoscope around my neck, I nervously enter Agusto's room. I observe Agusto's lifeless form: thin, dark and depressed. He does not respond to me. His eyes are filled with sadness as he looks down to the chain attaching him to the bed. Feeling shocked and hopeless, I retreat from the room and seek Dr. Dan for help.

Dr. Dan's prescription for Agusto? Spend time with him and treat him with compassion. Still confused by the implications of compassion, I look for another resource for help.

A leading physician who advocates for universal access to healthcare and justice for the poor, Dr. Paul Farmer, underlines the importance of compassion and persistence in his work: "By treating patients with dignity, compassion, and great competence, [healthcare providers] promote human rights on a daily basis."[19] Dr. Paul Farmer operates clinics to provide free medical services in many low-income countries including Haiti, Rwanda and Burundi. He observes that healthcare providers in his clinics do not only alleviate suffering through professionalism, but more importantly, they support basic rights for their patients through compassion and persistence. I also incorporate these two values in my care for Agusto.

Over the course of the following weeks, I flip through books with him. It does not work. Agusto sits like a frozen statue facing the wall of the room. I try again and again. Then I begin to question the effectiveness of my actions. One day a few weeks later, I learn from Agusto's parents that he likes to play soccer. This gives me a sliver of hope. I tell myself, perhaps Agusto will be able to connect with others through a game of soccer.

As we walk on a dusty road along an unfinished canal, Agusto begins to talk. He says that he has six siblings, he likes to dance, and he likes to eat chicken. Perhaps one of the most remarkable moments occurs when we reach the presidential palace.

"I want to shake hands with the president and ask him for help," Agusto says. Usually, a patient with schizophrenia loses contact with reality, unable to distinguish between imagination and real life.[20] Agusto breaks himself away from that description. He is now able to connect his humorous thoughts with real social interactions.

After Agusto finishes laughing at me for falling down, we step off the soccer field, leaving the kids to continue with their game. As we walk shoulder-to-shoulder towards his parents, they smile. Dr. Dan also asked me to plan an "exit strategy" for Agusto. Towards this goal, I sit down on a sidewalk with Agusto and his family to have a conversation. Agusto jokes about how he is best friends with Cristiano Ronaldo, a world-class soccer player, and how East Timor (the size of Connecticut) is 10 times bigger than America. Within a month of treatment with an antipsychotic drug and interactions with clinic volunteers, Agusto's ability to socialize and relate with

others is much enhanced. With the help of a Timorese friend, I tell Agusto's parents to make sure he takes the medication regularly and to be supportive of him and treat him with compassion like we do at the clinic. His parents nod their heads saying that they are ready to take their son back home. Our attention now turns to Agusto, who is entertaining us with an East Timorese *kizomba* [21] dance. Agusto is discharged a few days later to live with his family on their farm. To this day he continues to play soccer with his friends.

Agusto is just one of the millions of people with mental illnesses whose brilliance, skills and talents have been buried under the public's misguided view.[22] Stigmas stemming from public ignorance prevent these individuals from attaining their highest potential.[23] Mental illness cannot be cured by professionalism or metal chains. Rather, individuals with mental illnesses can be guided toward recovery through compassion. Bairo Pite Clinic emphasizes friendly interactions as a personalized treatment grounded in dignity and understanding. Studies in other developing countries also indicate that schizophrenic patients tend to have better long-term outcomes when they have greater social interactions.[24] Compassion is a quality of a community-based healthcare that allows Bairo Pite Clinic to provide effective treatments based on the needs of each patient. Sometimes a soccer ball can be more powerful than a stethoscope.

Persistence

"Excuse me; do you know where Lola Tilman lives?" Natalia asks a young woman sitting on the balcony of a house. On a late Friday afternoon, Natalia, a 22-year-old Timorese volunteer at the Bairo Pite Clinic, and I are out searching for a patient in Becora village, several miles away from the capital Dili. The young woman shakes her head; she doesn't know Lola. We close the wooden fence behind us and continue to make our way down a narrow path dotted with holes and puddles. Hopping from one stone to another while dodging trees, we search for other people who may know Lola. I try to remember her face from the first time we met.

"Paul, come to my office. I want you to see something," Dr. Dan calls me on the phone. I drop my reading on tuberculosis and rush to Dr. Dan's office with a pen and a composition notebook. From a dimly-lit patient waiting area, I open his brown wooden door. In the small bright room, Dr. Dan's tall, robust figure stands over a 20-year-old Timorese woman, who sits on an examination bed. Clutching a black stethoscope, Dr. Dan asks her to lie down. I stand right next to him while he places his stethoscope on the lower left side of her chest.

"Rumbling murmur." Dr. Dan hands me his stethoscope while explaining the sound I am about to hear. The loud distinct rushing sound is clearly not normal. Lola's heart valve (the mitral valve, which separates the left atrium and the left ventricle) is thickened, and cannot open fully: mitral stenosis. As her heart pumps, some of the blood flows backward causing the heart to work harder to pump blood to the body. Lola is a victim of rheumatic heart disease (RHD), a condition that is regarded as a "neglected disease of poverty."[25] RHD is caused by multiple episodes of untreated strep throat.[26] Over time an immune reaction to the bacterial infection causes damage to the heart valves, thus leading to the heart disease.[27] Children and young people living in conditions of poverty, poor sanitation, and overcrowding are at high risk of getting strep throat. Being left untreated, they ultimately develop RHD. RHD was once highly prevalent in the United States and other industrialized countries, but has now been

Sometimes a soccer ball can be more powerful than a stethoscope.

practically eliminated with an increase in household income and improved access to healthcare.[28] Lola is one among the 15.6 million people[29] living in underprivileged conditions struggling with RHD.

Dr. Dan places his palm on Lola's chest to locate the lower left chamber of her heart.

"High heave followed by electrical pulses." Dr. Dan explains that the condition is so advanced that the abnormal heart activity can be detected by touch. In East Timor, there is no echocardiogram or cardiac catheterization to diagnose heart disease.[30] Proper diagnosis relies on the clinical competence and creativity of the doctor to create an alternative to medical technology that is readily available in resource-rich countries.[31] Lola needs a non-surgical procedure to widen her mitral valve using a balloon catheter. Balloon valvotomy is a relatively quick procedure that is common in high-income countries.[32] However this procedure requires a specialized cardiac team, which East Timor does not have.[33] I feel the electrical pulses of Lola's overworked heart, excited by the new physiology lesson but saddened by Lola's future outlook.

"Dr. Noel Bayley is coming with his cardiac team in a few weeks," Dr. Dan announces. My nerves dance with joy, as I realize that Lola will have a second chance at life. Dr. Bayley is a leading cardiologist from Warrnambool, Australia. After volunteering at Bairo Pite Clinic several years ago, Dr. Bayley used his personal money to help a number of young Timorese patients with heart conditions receive surgery in Australia. Supported by his patients

and many healthcare professionals, he created the East Timor Hearts Fund to provide lifesaving heart surgery for young Timorese people.[34] I walk Lola out of Dr. Dan's office; my frown is replaced by a hopeful smile. I write down her contact information, and give Lola a note with the date to come back.

"This will save her life, we must find her," Natalia says. Dr. Bayley and a team of cardiologists are at Bairo Pite Clinic with an echocardiogram to screen for patients with cardiac conditions. In the crowd of over 30 patients waiting to be seen, Lola is missing. With compassion and the spirit of beneficence, Dr. Dan sends us to bring Lola to the clinic. Finding Lola is easier said than done, as East Timor does not have a formal address system. We only know that Lola Tilman lives in Becora village. Despite the great difficulty of the search, for the good of our patient, we must persist.

Healthcare providers must do whatever it takes to help their patients become healthy. Persistence of healthcare providers is crucial to the success of healthcare. In other words, we must find Lola.

Up a hill with low-rise wooden houses on either side, we ask everyone we encounter. No one knows where Lola lives. We keep hiking, avoiding puddles and chickens obstructing the path. Mud collects underneath our shoes and sweat streams down our foreheads.

The hike reminds me of the story of Dr. Paul Farmer. From mountains to mountains, Dr. Paul Farmer walked for several hours each trip, bringing tuberculosis medicine to his patients. He wanted to ensure that his patients' cure was not interrupted. He says, "The objective is to inculcate in the doctors and nurses the spirit to dedicate themselves to the patients, and especially to having an outcome-oriented view of [diseases]."[35] In short, healthcare providers must do whatever it takes to help their patients become healthy. Persistence of healthcare providers is crucial to the success of healthcare. In other words, we must find Lola.

We walk past an abandoned school – a leftover mound of debris from the Indonesian scorched-earth campaign. Behind the school is an old basketball court without hoops. Grass shoots penetrate the cracks in its concrete surface. A group of teenagers shout as they try to score a goal with their dirt-covered soccer ball. As we walk past the field, we cover our noses to protect ourselves from smoke that rises from a large empty canal ahead. At the bottom of the canal there is burning trash from food, papers, cardboard and other household waste. We ask for Lola along the way, but no one seems to know where she lives.

It is now six o'clock, a few hours into the hike, the sun is setting and yet we still have not found Lola. We are both exhausted and frustrated. Our mission seems bound for failure. We decide to search one last neighborhood before we have to deliver the sad news to Dr. Dan. We walk past an open space between houses where Timorese adults are playing volleyball, with Indonesian music on at full blast. We ask family after family for Lola but to no avail. It is dark and we have to go back. We walk out of the neighborhood and sadly head towards the clinic.

Natalia receives a phone call; it is a friend from the clinic. Lola was just seen by Dr. Bayley! She must have left her house before we could find her. Relieved by the news, we rejoice in knowing that our mission is not a failure after all.

Dr. Bayley's team assesses Lola's heart with an echocardiogram to confirm the disease. She was prescribed medicine to prevent further damage and now awaits an operation in Australia.

I walk into Dr. Dan's office to deliver the news he already knows. Still sitting on his chair with a stream of patients constantly coming in and out of the room, Dr. Dan glances at me with a warm smile. With persistence, Bairo Pite Clinic is able to provide needed medical care for Lola and the underprivileged communities. With wellness of the patients as the end goal, Bairo Pite Clinic marches on with muddy shoes, striving for one great miracle after another.

Conclusion

Under the moonlight at Pantai Kelapa beach on the shore of Dili, I share my last few moments in East Timor with friends, Timorese volunteers from Bairo Pite Clinic. The noise of the water hitting the shore is covered by the sound of a guitar and our voices singing together. The presence of my friends gives me comfort. The breeze and the smell of mildly salty ocean water soothes my senses. On my left arm is a green wristband imprinted with a picture of two hands in firm grip and the word "Friendship." As a remembrance of our companionship the guys wear these green wristbands while the girls wear pink ones printed with the word "Forever." Dancing to songs and posing for the camera, we fill the night with joy and laughter. I cannot think of a better way to end my summer experience.

Reluctantly, I say goodbye and give everyone one last hug. These fellow Timorese volunteers are more than just a group of young healthcare providers. They make up a community of friends, brothers and sisters who believe in the value of strong moral principle, compassion, and persistence. In this setting, I observe that such a community is the force that allows Bairo Pite Clinic to adapt to its resource-poor setting by creating its own solutions to provide effective healthcare for the Timorese population. As illustrated by the stories of Antonio, Mary, Agusto, and Lola, community-based healthcare treats patients with dignity, and advocates for patients' rights with determination. Bairo Pite Clinic's community-based model is a valuable example we can learn from.

Nigel Crisp, former director of England's National Health Service – the world's largest national healthcare system – asserts that there are many valuable lessons richer countries can learn from poorer ones.[36] Facing resource challenges, poorer countries have to learn to engage patients and communities in their own care, prioritize prevention and intervention, deploy new technologies, and manage the burden of increasing costs.

Having experienced this struggle firsthand, I came back to the United States with a new perspective of the effectiveness of a community-based healthcare system. With much lower community engagement in healthcare, higher reliance on physicians, and the overly inflated costs of advanced procedures,[37] this country that spends over $2.3 trillion on healthcare annually can significantly benefit from the community-based model of Bairo Pite Clinic.

Perhaps the most valuable lesson I learned from this profile of community-based healthcare is that poverty cannot be solved by any individual or authority alone. Despite having limited resources,

Perhaps the most valuable lesson I learned from this profile of community-based healthcare is that poverty cannot be solved by any individual or authority alone.

Bairo Pite Clinic is able to provide effective medical services through the collective effort of the community as a whole. Bairo Pite Clinic represents an example of how people, even with few economic and material resources, can take ownership of their own health and create healthcare that permeates their impoverished conditions.

Community engagement is Bairo Pite Clinic's cure for poverty.

Notes

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