Elizabeth Sheehan was thumbing through Foreign Affairs magazine last year when an article and photo caught her eye. The story, headlined "The Global Health Burden," addressed the failure to deliver rural health care in developing countries. The photo of a prototype clinic was intriguing. Sheehan peered more closely: Could it really be one of those ugly metal shipping containers that litter ports everywhere?
"It was my `aha!' moment," Sheehan says.

That was the birth of Containers2Clinics, a nonprofit that aims to recycle the metal boxes into clinics serving the poor in the developing world. Sheehan's first "container-to-clinic" will be on display at the Institute of Contemporary Art at a launch party Nov. 16. "There are 20 million of them rotting all around the world," Sheehan says. "They're often just used once. Ten million children a year are dying of treatable illnesses because there's no clinic, no doctor or nurse, no medication."

Sheehan, who lives in Dover with her two children and two dogs, is not the typical suburban soccer mom and do-gooder. Sure, her spacious home with its landscaped lawn overlooks the Charles River, and her living room is filled with art from her travels. But those travels were largely in developing countries, where she lived for many years. Now armed with a plan to turn metal boxes into medical bases, Sheehan believes she can radically improve health care in rural outposts where people have never seen a doctor or nurse.

A Duke-educated physician's assistant, Sheehan worked among the rural poor in North Carolina and the urban poor in New York, and in an emergency room in Quincy before heading abroad with her medical bag. In 1990, she decided to take her earnings and walk around the world, as she puts it.

"I was 30 years old, single, and I visited 20 countries looking at health care systems," she says. She dropped in at clinics and hospitals in Tibet, Nepal, India, Indonesia, and several African countries. Wherever she went, she took food. "I call it my three-by-five campaign: I'd take three dozen eggs and five bags of rice, or whatever I could get in the market."

In Cambodia, she visited minefields where she learned there was no medical care: If someone stepped on a mine, they'd die on the spot. "They were placed in rice paddies with children walking through them, around schools and wells." Sheehan signed on as the unpaid medical director of The Halo Trust, the British nonprofit that removes land mines, one of the most hazardous jobs on earth. Her office was on the edge of a minefield.

In one year she witnessed 15 deaths and more than 30 maimings - which was an improvement over the year before, when the fatality rate of the 60 villagers and de-miners who stepped in the wrong place was 100 percent. People began inviting her into their homes, and what she saw would change her life.

"There were babies dying of malnutrition, dehydration, pneumonia, nothing that food and a simple antibiotic couldn't cure," she says. Sheehan moved with The Halo Trust to Mozambique in the wake of its civil war. "We were on the ground before the de-mining started, trying to get money to scale up the program."

It was then that she decided she needed an international public health degree. At the London School of Economics and the London School of Hygiene & Tropical Medicine, she got a joint degree in public health and health policy. During her time with The Halo Trust, she'd met and married a British bomb disposal expert. When Sheehan completed her degree, the couple returned to Africa, where they worked in Mozambique - he for the United Nations clearing mines, she for the United States Agency for International Development.

"It was very hard for all of my friends to understand why I was going to help these people so far away," says Sheehan, who is 50 and divorced now. "But I really felt a solidarity with the woman in a hut who had a baby and couldn't get health care. I felt some form of health care should be free and available to everybody. It's like water."
But her parents understood. Her father had come from humble beginnings in Jersey City. Her mother's family ran a tiny grain distribution business. Gerry and Maureen Sheehan raised eight children in a small home in Plymouth and sent them all to college. "My message from my dad was, if I'm going to pay for this great education, you're going to have to pay it back to society," says Sheehan, who got her undergraduate degree from Holy Cross.

Anheuser-Busch eventually bought up that tiny grain business, which Gerry Sheehan took over upon his father-in-law's death. L. Knife & Son Inc., headquartered in Kingston, is now one of the largest beer distributors on the East Coast. Fifteen years ago, Elizabeth Sheehan started the Sheehan Family Foundation at her father's behest, as a way to give back to the community the company serves. The foundation has given away $11 million so far, half to environmental causes in Southeastern Massachusetts and half to education for low-income children in Brockton and Brooklyn.

At 78, Gerry Sheehan remains the chairman of the board at L. Knife; son Tim is the CEO. The elder Sheehan says the clinics will require patience to keep them going, from financing to staffing levels, security to cleanliness. "When Elizabeth puts her mind to something, she does it," he says. "She's not a dilettante. She's not going to show up and break a champagne bottle on the back of a container and say, `Have fun, guys.' She hangs in there. She's persistent."

None of the family foundation money has gone in to Containers2Clinics, nor does Sheehan take a salary, yet as executive director she has two paid staffers. Last year she got a friend to write a business plan and began to raise money. The first retrofitted container will cost $100,000, including transport, equipment, medications and local staffing: a doctor, three nurses, and three community health workers. After that, the annual operating costs will be about $40,000, Sheehan estimates.

Sheehan is adamant that the clinics be staffed and owned by local workers. "You can't just keep sending money," she says. "It's a de-motivator." Eventually the containers will come with a manual telling local workers how to construct and operate a clinic, from where to put the doors to staffing levels and pharmacy needs. The kit would bring the initial cost of a retrofitted container/clinic down to $20,000 apiece, not including staffing and drug costs.

The first clinic, the one on display at the ICA, was designed by Anshen + Allen of Boston and built by Stack Design Build of Pawtucket, R.I., both at a deeply discounted cost. It's actually two containers, in an L-shape, connected by a shaded patient waiting area. There are two examination rooms, a diagnostic lab, and a pharmacy. In the back, there's a break area for clinic staff - all of this from metal boxes that measure 20-by-8 feet.

Andrew Keating, a principal at Stack, says he was attracted by the unusual construction type and the humanitarian use. "We believe in the validity of the concept," Keating says. "We're very interested in modularity, sustainability, and replication. There's a neat efficiency there."

Though shipping containers are being used for buildings in Europe, the concept is just catching on in the United States. Keating is working on an 11,000-square-foot office building in Providence made out of 33 shipping containers, each 40 feet long.

The containers, he believes, are a good value. "Because of the trade deficits that exist between the US and countries like China, there are many unused containers sitting in places like the port of Newark," he says. They cost around $2,000 each, though some may be free for the asking.

The first clinic, with donated equipment, will ship out to Bani in the Dominican Republic in January and will be run by the Waltham-based Infante Sano, a nonprofit that seeks to improve the health and
lives of women and children in Latin America. In Bani, Infante Sano is training local staffers for the clinic and the Dominican government will provide the medications.

Sheehan plans to branch out to Central America. She hopes to have 50 clinics on two or three continents within five years, 250 within 10 years. They could also be used for disaster relief in remote areas, she says.

"It's simple," she says. "It's reusing these eyesores that are littering the world, while bringing medicine to the last mile."

Credit: Bella English, Globe Staff