

VIDEO TRANSCRIPT FOR “CHILDREN IN CRISIS”

online at <https://spice.fsi.stanford.edu/multimedia/children-crisis>

On-screen text:**Children in Crisis**

a discussion with Paul H. Wise

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Paul Wise: The primary goal of the Children in Crisis effort is to improve the health of children in the most difficult places in the world to work. To focus on children in areas of civil war, conflict, chronic political instability, and areas where the governments don't function very well. Our focus is trying to get the best health services, preventive services, to the kids in some of the poorest, most difficult places on earth.

The Children in Crisis program is different than many other efforts to provide services to children in these areas in that we see as fundamental the working together, the coordinating, of the best health services with the best understanding of the political and economic situations in the area. Therefore, we need to have pediatricians, nutrition specialists, nurses—a whole variety of people who have technical health skills—work closely with political scientists, people who worry about global security, in order to come up with new solutions—solutions that can actually function in these environments.

We're very committed to working in the areas... basically places in the news, like the Middle East, but also places that the news has forgotten. Places in central Africa, where the fighting comes and goes, but services, security really are nonexistent in these areas. Central America, which was plagued by civil war and political instability for many, many years, and we still see the remnants of that political turmoil in the failure of the system to provide adequate services to women and children.

But we always work with local partners. It's not that Stanford is parachuting in to work in these areas, but building long-term, strong relationships with groups that have long been committed to working in these areas—so, in Central America, the Middle East, in Africa, and increasingly maybe now in Southeast Asia. We seek out and build relationships with partners working on the ground. And because of that, we have greater confidence that the kinds of strategies being developed will actually function in the real world.

One of the primary commitments is in Central America—the country of Guatemala, which sits just below Mexico and borders Belize, Honduras, and El Salvador. And Guatemala experienced a running civil war for many years, beginning in the mid-1960s, and the peace accords were finally signed in the late 1990s. However, the country has not recovered. The other issue is that Guatemala is an extremely poor country. And civil conflict, political instability, and extreme poverty has created major challenges. It's generated profound challenges for the provision of services like child health services. And so our efforts are to create strategies that can actually work in these areas.

We've partnered with groups in Guatemala—particularly one area of Guatemala—[in] a community health worker program, where local villagers in these indigenous Mayan Indian

villages have created a system where local people are trained in basic health service provision, prevention, dental care, health education to ensure that health services actually reach the people in need. We work very closely with this program to address what is really recognized throughout the area as a fundamental problem, which is child nutrition. Children don't grow well because of inadequate food and poor sanitation, which means that they constantly are getting sick. Each time they get sick, their nutrition fails. Because their nutrition is poor, they're more likely to get sick, and you get a spiral of infection and poor nutrition that ultimately, for many of these children, unfortunately, has meant their death.

The community health worker program has tackled this problem with nutrition and infection and now has an active program to ensure that every kid is adequately nourished. The community health workers are out in their communities taking the height and weight of every child from birth until the age of five every two months to try to identify any child that's beginning to fall off their growth curve. And then intervene. You just can't identify the kids; you have to do something about it. And so they have an intervention program that includes food supplementation, which is giving highly nutritious food to the family, working with the parents, particularly the mother, to improve the child's nutrition to try to address the infections that keep on coming. And the program now serves about 20 villages. There are about 1,500 children in the program at any given time. And the child mortality rate has fallen dramatically with this program. And severe malnutrition has virtually been eliminated because the program catches children before they become severely malnourished and gets them back to a more normal growth curve because of the intervention program, before they can really fall into this very deadly spiral of infection and poor nutrition. So the program is functioning now almost 10 years and has been extremely successful.

However, one of the problems that we have is that it takes a lot of training for community health workers to learn how to graph a growth curve to see whether a child is falling off their curve or not, and to interpret that graph, and then respond appropriately. It takes about three years of ongoing work and training. They're now very good at it. However, it's definitely a barrier to the dissemination of a program like this to other community health worker programs around the world that may not have three years and the ability to train people.

So we went to the Computer Sciences department here at Stanford, which of course is world-famous, and say, "can you help us figure out a way to overcome this barrier—to sort of leapfrog the requirements for training?" And they created with students—computer science students here—and faculty a mobile app that sits on an Android tablet that will basically do all the graphing functions that the health promoters have had to do on paper in the past. So the health workers just have to put in the child's height and weight for that day, and then the program takes over. It will plot the child on a curve. It will interpret the curve. It will convey this to the health worker. It will lead them to the appropriate protocol for how to intervene. It will alert the leadership of the program that there's a new child in severe malnutrition in such-and-such community. It uploads to the cloud in a very secure way.

And we now have the ability to rapidly deploy this nutrition surveillance and intervention program in other communities because the training requirements have been reduced from three years to what looks like probably close to three months, because the community health workers are really good at using the tablet. After the first week or so of experimenting with it, they get really good. Everybody has cell phones. Most of the community health workers—not all, but most—are young, and so they just take to the technology very, very quickly.

The way that the community health worker program has been developed and has used this system, you only need five little Android tablets to serve 1,500 children. So it doesn't cost a lot to get these tablets bought and out there into the field. It's very inexpensive. There are other places around the world who are waiting for us to develop these programs so that they can begin to implement them, or at least try to implement them, in different parts of the world. So it's a good illustration of how Stanford, a university in the United States sitting in Silicon Valley, can help deliver critical health services in some of the most complicated environments to work—in essence, to leapfrog longstanding traditional barriers to the provision of critical services.

And while we recognize that people in Silicon Valley are often creating an app to change the world every other day, this application grew out of direct collaboration with the community health workers in the field. We have a computer science graduate from Stanford living in Guatemala, every day working in the field with the community health workers, developing and refining this technology. And so it's the best of what Stanford can bring wedded to a deep commitment to respect the insights, the capabilities, the strengths of local communities working in very complicated environments—environments that have been plagued by violence, conflict, and political instability. Our effort is to take advantage of the strengths in these communities, as well as attend to their profound needs.