

Taking nothing for granted, not even **BLOOD**



Naa Sodzi-Tettey had seen the need for a better blood donation system ever since she started working as a physician in Ghana, but this time it was personal. Her mother was terminally ill and suffering anemia and needed a transfusion. So, Sodzi-Tettey did what Ghanaians always do: she called her extended family, asking them to drop what they were doing and cross Accra's traffic-snarled centre to donate. "It's stressful," she recalls. "You call one person and they are out of town. You call another."

WHAT MIGHT SEEM like a simple problem: getting blood from a person who has it to one who needs it, turns out to have many complex dimensions says Sodzi-Tettey, who is also a lecturer in

medical physiology. Not only must there be enough people with the spare time and motivation to donate in the first place, the donations must match the blood type of the person in need and pass a health screening. It must also be kept cool from donation to transfusion, which is easier said than done when delivering to remote patients.

That may be why Ghana's government found it tantalising to look to drone-delivery solutions, like [the \\$3 million-a-year one it launched in April 2019](#).

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“**H**aving worked in the health systems in Ghana, I knew that there was no blood supply anywhere that was available for drones to carry from place to place. I was not happy: I was livid,” Sodzi-Tettey says. She was not alone in opposing the plan, which attracted [criticism from politicians and healthcare workers](#) for its price, and for not reflecting the country’s more immediate health needs.



MAKING THE MOST OF WHAT YOU’VE GOT

For one thing, that’s because Ghana’s hospitals, such as St. Anthony’s, where Sodzi-Tettey worked, already had an informal just-in-time delivery network through which health workers tapped a local network of registered—and paid—blood donors.

“IT WAS QUITE EFFECTIVE,” says Sodzi-Tettey, who worked there for more

than three years. “There was never a time when we needed to transfuse someone and could not get blood.”

Still, the hospital was relying on paid donors. Unpaid blood donations are the gold standard because they tend to be safer, but lab screen after donation can still ensure recipient’s safety. Ghana’s National Blood Service, which works with both public and private health institutions, has been trying to raise the rates of unpaid donations, but failed to reach its goal of 50% voluntary unpaid donations, it reported last year.

Since the uproar over drones, Sodzi-Tettey has been wrestling with ways to improve Ghana’s blood supply problems. “With a complex problem, you cannot use a simple solution to solve it. You try that, and you end up with even greater problems,” she says.

THROUGH THE TRANSFORMING CHANGE programme, Sodzi-Tettey realised that fixing a country’s blood supply isn’t as simple as converting informal donation networks into formal networks, because the things that pump or restrict a nation’s blood supply exist in so many parts of society, from the halls of the mining industry to the carbon-laden atmosphere. “One starts thinking in a multi-dimensional way,” she says.

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SOCIETY'S VEINS AND ARTERIES ARE ALL CONNECTED

For example, if the changing climate leads to smaller harvests and poor nutrition, members of rural communities will be spending more of their resources paying for food. Unchecked mining can contaminate fisheries, harming another source of nutrition. People with poor nutrition often have lower levels of haemoglobin, the oxygen-carrying component of blood, and are more vulnerable to diseases such as malaria. Poor nutrition acts in parallel: it makes people likelier to need blood, while making their neighbours less likely to be able to donate suitable blood.

“We are going to end up in a situation where we cannot take for granted anymore that people will be available to donate blood,” Sodzi-Tettey warns.

There is also a question of demand: better mosquito control, for example, might help reduce malaria incidence and, therefore, the demand for blood transfusions in the first place. That is because certain complicated cases of malaria cause anemia, which requires treatment by transfusion. Sodzi-Tettey now sees that it will take tackling both the supply and demand sides to close the blood donation gap.

“You can’t tackle from all angles, but wherever you tackle from, you must make sure that every opportunity you mention the fact that there are more angles,” Sodzi-Tettey says.

THAT MEANS THAT WHATEVER strategies she develops to close the blood gap will need to be multi-faceted. For

example, a conventional approach might be to recruit corporate leaders to host a blood drive at their company offices. But, Sodzi-Tettey says that it’s equally important to recruit community leadership, which might involve direct contact with workers or local religious leaders. Otherwise, communities might call into question the real motives for blood drives, as happened with on spiritual group.

“When people feel that they are part of something, they are so, so much happier to work with you,” Sodzi-Tettey says. In her mother’s case, that something was family: a compatible relative did eventually pick up the phone and make it across Accra to the hospital in time for her mother’s treatment.

But the case still taught Sodzi-Tettey a lesson that she says her government’s health ministry should take to heart: you can’t just take for granted the availability of blood, even amongst your blood.

Naa Sodzi-Tettey is a medical doctor with experience as a clinician, district medical practitioner, and physiology instructor. Her research is in the areas of human longevity and ageing. She works in Accra, Ghana.

[Transforming Change](#) is an Africa-based programme that strengthens participants’ capacities in social-ecological resilience, systems and complexity thinking, and systems entrepreneurship—seeking to transform the very way we approach change. The programme is funded by the [Swedish Institute](#) and is delivered through the [Stockholm Resilience Centre](#) in partnership with the [Betha Centre for Social Innovation and Entrepreneurship](#) and the [Centre for Complex Systems in Transition](#).