

The Bone Marrow Registry in Nigeria – the first in Nigeria and only the second in Africa – was launched on February 24, 2012 with 300 donors. Over 70 diseases can be cured with a stem cell transplant, including several forms of cancer, autoimmune disorders and sickle cell. Yet, fewer than 1 in 5 black patients in the United States are able to find an unrelated donor (compared to 70% of Caucasian patients). For patients in African countries, the statistics are even more dismal. This imbalance is largely due to the extreme scarcity of black donors – who comprise only 8% of the U.S. registry and are virtually non-existent in Africa (outside South Africa). The marked genetic diversity among people of African ancestry further decreases the likelihood of finding a perfect match.

Now that Nigeria has its own registry, patients can search among their own for a matching donor. They can also look abroad, since Nigeria is a member of an international cooperative of registries. We now hope to create jobs by investing in local vendors and to reduce the cost of transplants by building healthcare capacity. The registry has partnered with a molecular pathology laboratory in Enugu to perform its HLA-typing and pathology screening tests, instead of outsourcing these tasks to European or American laboratories. The purchase of specialized equipment (such as aphaeresis machines) will further reduce costs and support local providers by allowing stem cell donations to be processed in Nigeria.

We also seek to construct the first accredited cord blood bank in Africa. A supply of 40,000 cord blood units can provide grafts to a larger percentage of patients from minority groups than a bone marrow registry with over 4 *million* donors. Cord blood has the added advantage of immediate availability. The timing of this project is auspicious. The first successful stem cell transplant in Nigeria occurred at the University of Benin Teaching Hospital in September 2011. Shortly thereafter, the Ministry of Health appointed a task force to develop additional transplant centers and announced subsidies for future transplants.

These exciting developments have created a domestic market for cord blood units, in addition to the existing international demand. In order to cover its operating costs, the cord blood bank proposes to offer private banking services to Nigerian clients for a fee. Publicly listed units, by contrast, will be banked free of charge to maximize the social impact. Ideally, other African nations will replicate this pioneering model and create a pan-African network of banks to bring desperately needed genetic diversity to the international donor pool.

We need modest start-up capital and technical expertise to provide training in cord blood collection; to purchase additional equipment (including an aphaeresis machine, liquid nitrogen tanks, an independent power supply); and to secure accreditation from international regulatory bodies.