

## Africa's road to blood ruin

Events in the last six months alone demonstrate the magnitude of the problem.

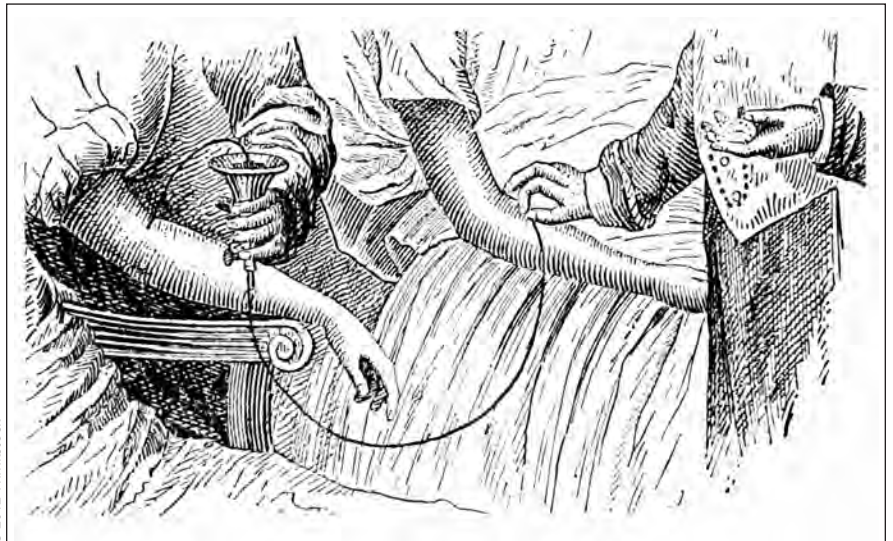
In Cote d'Ivoire, government and World Health Organization (WHO) officials say that blood collection campaigns were halted by armed rebellion and post-election violence. Records indicated that at a hospital in the western city of Man alone, 83 of 923 people who needed blood between January and November of 2011, died because they failed to receive transfusions. The majority were children.

In Tanzania, the manager of the national blood transfusion service issued pleas to churches to arm-twist worshippers into donating blood, because school closing season was expected to gut blood banks as students donate 90% of the nation's blood supply.

Several news outlets report that hospitals around the continent are using innovative methods to obtain blood, such as a case in which a Nigerian was convinced to donate blood — and pay a small fee to process it — because his wife needed blood to deliver her baby through a Cesarean section. When he returned from donating, he discovered that his wife had delivered normally.

Such are the nuances and vagaries of blood collection and distribution in Africa — 37 years after the World Health Assembly urged an overhaul of blood transfusion services on the continent ([www.who.int/bloodsafety/en/WHA28.72.pdf](http://www.who.int/bloodsafety/en/WHA28.72.pdf)).

Some progress is being made, largely as a consequence of investments made in 12 African countries by the US President's Emergency Plan for AIDS Relief (PEPFAR), according to a recent report from the US Centers for Disease Control and Prevention ([www.cdc.gov/mmwr/preview/mmwrhtml/mm6046a2.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6046a2.htm)). It's been a "game-changer" for blood safety in sub-Saharan Africa, claims Sridhar V. Basavaraju, a medical officer for the CDC. "With PEPFAR support, dramatically more blood is collected across the countries than



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**In several African nations, the majority of transfusions are done as emergencies and the blood is provided by relatives of the patient.**

before the program started, and appropriately tested for HIV and transfusion-related disease agents."

But major challenges remain, including the absence of national policies and programs for blood transfusion in some countries; continuing reliance on family members and paid donors (who are less likely to reveal behavioural risk for HIV); inappropriate clinical use of blood and a lack of guidelines on safe clinical transfusion procedures; inadequate and nonstandardized screening procedures to identify potentially contaminated blood; inadequate institutional and technical capacity to collect, test, process, store and distribute donations; greater demand for blood because of the high incidence of complications during birth and anemia among children; and, of course, low donation rates, brought on in part by cultural tensions.

WHO says the 43 nations within Africa, who comprise 12% of the global population, contributed just 4.3% of global blood supply ([www.who.int/worldblooddonorday/media/who\\_blood\\_safety\\_factsheet\\_2011.pdf](http://www.who.int/worldblooddonorday/media/who_blood_safety_factsheet_2011.pdf)).

Blood issues continue to be ignored by governments and donor recruitment strategies are inadequate, says David

Mvere, secretary general of the Africa Society for Blood Transfusion and CEO of the National Blood Service in Zimbabwe.

"The special needs of blood transfusion have not been appreciated much yet and catered for by the governments properly," Mvere says, adding that effective blood donor mobilization strategies would require "funding and social marketing. Where these have been done [Zambia and Kenya], indeed, donations from volunteers have surged significantly."

Cultural obstacles are often an enormous problem with respect to donation, adds Dr. Loyiso Mpuntsha, CEO of the South African National Blood Service. "In South Africa, because of history of inter-racial tensions, we have to deal with the cultural issues, population diversity, and beliefs about getting blood from anonymous donors," she says.

Other problems include a lack of data collection and information management systems (which would ensure traceability of donors, donated blood and transfusion recipients), as well as reliance on Western models of transfusion services, says Imelda Bates, a professor of tropical hematology at the

Liverpool School of Tropical Medicine in the United Kingdom. In African countries, unlike Western ones, the majority of transfusions are done as emergencies and the blood is provided by relatives of the patient, she notes, adding that Western blood services rely on an ability to predict demand for blood, some manner of centralized collection and a reliable distribution network. But in Africa, there is no evidence that such a centralized system would be affordable or would provide adequate blood supplies, she adds.

Solutions to the myriad problems appear equally in short supply.

Among the measures that are being undertaken is a bid by the Africa Society for Blood Transfusion and the Interna-

tional Society of Blood Transfusion to implement some form of accreditation program for blood collection facilities, complete with evidence-based standards for blood banks. A pilot project in Tanzania is scheduled to be completed in April and it's hoped it will eventually be implemented continent-wide, says Mvere. "We are going to have a system where if we assess African blood banks, we can place them at levels 1, 2, or 3 with level 3 representing full conformance to the standards and leading to accreditation."

Efforts at bolstering donation rates appear to be aimed at youths, particularly in schools. Nigeria's Blood Drive Initiative now has 500 active young donors, primarily university students, reports Adelu-

woye Adekunle Oluwatosin, executive-director of the initiative.

In South Africa, youths aged 19–25 are given certificates and token gifts if they donate 25 units of blood before the age of 25, Mpuntsha says.

The gains to date have been relatively sparse and will continue to be so until countries integrate blood transfusion services into their health systems, provide adequate funding and introduce appropriate regulatory oversight, Mvere says, grimly forecasting that once current international funding to improve blood services in Africa dries up, they will again slide into neglect. — Bernard Appiah, College Station, Tex.

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