



**The Wonder of Blood**  
*- Saving Lives in Africa*

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**APPLIED SCIENCE**

STRATEGICALLY SIMPLE SOLUTIONS

*Global Blood Fund and the Africa Society for Blood Transfusion,  
congratulate our winners and thank everyone who entered*

## **WINNING ENTRIES**



**Submitted By:** Dr. Atiku Isaac Optika

**Country:** Uganda

**Title:** *Seven Strangers Saved My Life*





As a Principal Medical Officer with the Uganda Blood Transfusion Services (UBTS), I have devoted years of my life to collecting blood donations to save lives but never dreamed that I would become one of the tens of thousands of people that UBTS saves each year. UBTS is a national agency mandated to distribute blood collected from voluntary non-remunerated donors to all hospitals free of charge. But for three blood transfusions, one operation and seven strangers who gave their blood to save a life, I would not be here to tell my story.

In February 2012, I travelled to Kampala from where I live in Arua, the main city of the West Nile Region in north-west Uganda, situated next to the Democratic Republic of Congo and South Sudan, for official work with UBTS. Afterwards, I decided to visit Hoima in western Uganda as it is relatively close to the capital. My wife worked in the hospital there and I thought it would be a good opportunity to spend Valentine's Day together.

After a lovely day and evening, I woke at 5:00am to prepare for the 500km journey by bus back to Arua. Public buses to the West Nile region are poorly maintained, with drivers who often have no respect for

the road conditions or the speed limit. On this occasion, I was especially unlucky – halfway through the journey, the driver dozed off and lost control. The bus overturned.

There was panic everywhere, and injured passengers; people were screaming. I felt numbness in my left arm, followed by excruciating pain. Looking down, my entire arm was covered in blood.

I forced my way out of the wreckage into the open. In the light, I could see that a major blood vessel had been completely severed. My arm was gushing blood and, despite being a doctor, I knew there was little I could do at the side of the road.

The bus-conductor tore a piece of my shirt and tied it as a tourniquet to try to stem the bleeding. It helped a little, but soon I started to feel dizzy. I had already lost about three litres of blood since the crash, equal to half of my total blood supply. I thought I was going to die.

Then the unbelievable happened, as a police patrol vehicle arrived at the scene of the crash. The lack of an adequate emergency response service in Uganda meant we had assumed ourselves unlikely to receive any help. The most seriously hurt were taken straight to the nearest local hospital by the police.

Blood, which is usually rare, was available in that remote local hospital in the sugarcane plantations. I was transfused immediately but the hospital was ill-equipped to deal with severe injuries, and I was sent to the closest large medical facility, Hoima Regional Referral Hospital, for treatment. All I could think about was the fact that my wife was working there.

We drove to Hoima at break-neck speed and arrived to find my wife on duty. However, on seeing my injuries, she was too shocked to attend to me. A colleague on leave responded immediately and I was taken to theatre where the bleeding was finally arrested. However, by this time, I had again lost too much blood and needed another transfusion.

However, there was no blood available, something which is all too common, even in the largest hospitals. My boss at UBTS immediately dispatched a team to evacuate me to Mulago National Referral Hospital in Kampala. The Mulago team collected blood from Kiboga hospital, en route from Kampala to Hoima. It was this blood that eventually helped me make it to Mulago as I was transfused along the way.

We arrived at Mulago, the largest hospital in Uganda, about 15 hours after the accident. That night, the only treatment I received was an X-ray, which showed large pieces of glass deep in my arm which would need to be surgically removed.

The following day, I was taken to theatre where the glass was taken out, but I had received surgery too late. Parts of my wound started rotting on the third day, as my lower arm furthest from the wound started dying.

As my arm rotted, I started noticing features of kidney failure. One of the senior house officers at the surgical ward confirmed my fears and warned me of the dangers ahead.

The only way to save my life was to amputate my arm as soon as possible, to prevent the necrosis from spreading. However, by the time I was ready for theatre, Mulago had run out of blood, meaning I could not undergo the amputation due to the risks of it taking place without transfusion.

The Nakasero blood bank, headquarters of UBTS, came to my rescue, telling me that blood was available for collection. Eventually someone was found to collect the blood and my operation went ahead.

Despite these difficulties, I received blood, and my operation was a success – losing my arm to save my life. If it had not been for the seven people who had donated, I would have died. Many people are not so lucky, and suffer through accidents, childbirth, and malaria only to die from lack of blood. These deaths are preventable – greater numbers of donors would lead to a significant reduction in deaths.

Since my accident and recovery, I have returned to my work with renewed dedication. Uganda still lacks a sufficient supply of safe blood but my team and I work tirelessly to provide enough for the hospitals in our region. Serious road traffic accidents such as mine occur frequently in Uganda. Malaria is all too common across the country, especially in West Nile region in the north-west, and if untreated it causes severe anaemia, requiring a blood transfusion. About half of all blood in Uganda is used to treat children with malaria. Women are also major recipients of blood – before, during and after childbirth in particular. I therefore call on all Ugandans to donate blood today – you never know when it will be your child, or your mother or wife, or even yourself, who needs blood, so act now to save a life.

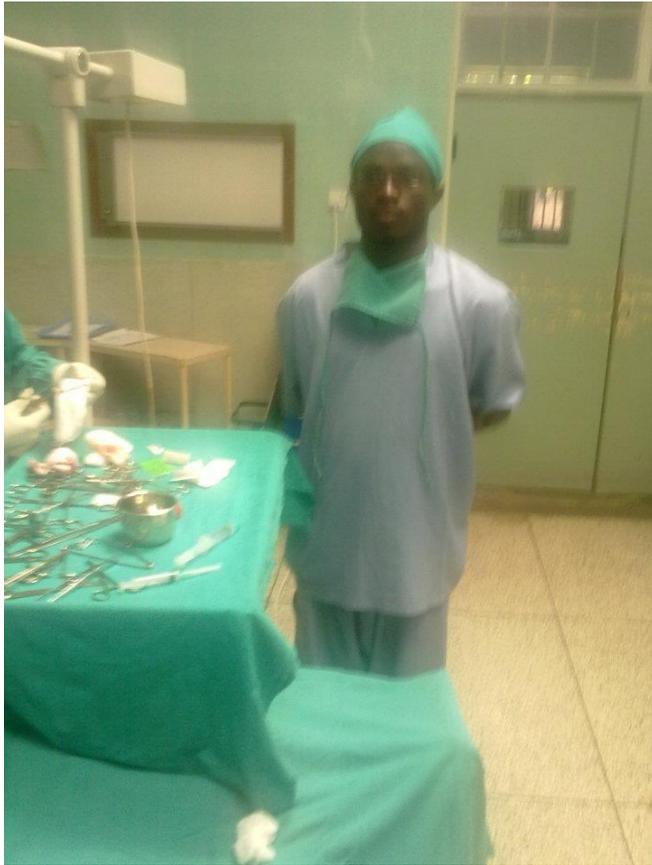


**Submitted By:** Luyinda Emmanuel

**Country:** Uganda

**Title:** *If Only There Was More Blood*





The clock in Kumi Hospital Labour ward, Eastern Uganda, ticked day and night as we helped pregnant mothers bring forth their offsprings. As a medical student, in my first week, I disliked the sound from the movements of its hands, but got used to it and eventually started liking it as discovered it helped a lot in telling time of delivery.

One day, a mother we had delivered started bleeding profusely, called for help from other doctors and nurses. We ran the lines, gave her drugs and did all we could to stop the bleeding. The bleeding seemed uncontrollable. The woman's vitals were plummeting. I ran to blood room, got the shocker of my life when the nurse in charge gave me only one unit of blood as the other units had been booked for the severely anaemic children on the paediatric ward. I held the one unit in my hand and it felt like I was holding life. I ran back to the labour ward with one unit of blood well knowing it was not enough. Tick tock, tick tock, the clock made that same sound as it had always done since its installation reminding me of the essence of time at that moment. The transfusion gave us some bit of hope and she seemed to come back to life. A few minutes after the blood unit was done, vitals worsened again. Off to the

blood room I left, as the team tried to resuscitate her. I ran faster than ever before to the blood room knowing at the back of my head that there was no blood left but expected a miracle to happen. This time the blood room nurse confirmed to me that there was no more blood in the hospital. I rushed back to the labour ward and the clock hands seemed to pause as if in sympathy of the woman's situation. We tried all we could to save her life, but all in vain as she needed at least another unit of blood. By the time I touched her again, I was just in time to feel her spirit depart.



**Submitted By:** Hezekiah Mwaniki

**Country:** Kenya

**Title:** *The Kenyan Story That We Must Tell; Blood Donation Bridges Ethnic and Political Differences of Warring Communities in Kenya's 2007/2008 Post Election Violence.*

*Images withheld whilst copyright established.*

During and immediately after the 2007/2008 post-election violence in Kenya, there was a high demand for blood in hospitals for transfusing to the survivors of the brutal politically and ethnically instigated attacks. During this period, blood collection was low, voluntary blood donation sessions were difficult and even impossible to conduct in some places especially areas where the fighting was intense. Kenya National Blood Transfusion Service (KNBTS) and mobilizing partners had to therefore strategize and maximize blood collections from the relatively calmer areas of the country to sustain the blood needs for the entire country, with the highest demand being in the volatile areas.

Geographically, areas that were highly affected by the violence were in the then provinces of Nairobi, Rift valley, Nyanza, and Coast. These provinces were said to be opposition strongholds where the majority were believed to be in support of the opposition presidential candidate Raila Odinga of the Orange Democratic Movement (ODM). Informal settlements in Nairobi also experienced high incidences of violence meted using machetes, crude weapons, rape and gun shooting incidences. Some of these settlements/slums are Kibera and Mathare which were also believed to be in support of the opposition. There were a relatively high number of victims and casualties from these areas.

KNBTS was practically only able to conduct blood donation sessions in the relatively calmer areas of the country which included the then Eastern, Central and North Eastern provinces. In contrast these provinces were believed to be in support of the incumbent president Mwai Kibaki of the Party of National Unity (PNU) who was contesting for a re-election.

This scenario therefore presented a unique unifying factor, where the regions largely in support of the incumbent presidential candidate Mwai Kibaki gave blood to save lives of survivors from regions largely in support of the opposition candidate Raila Odinga. Transporting the blood presented a challenge; with the numerous road blocks erected and manned by rowdy armed youths, road transport was highly disrupted and risky; Kenya Airways offered to airlift the blood to the transfusing hospitals in the affected areas for free.

Blood is transfused to a patient without considerations of race, ethnic, regional, political affiliations or any other perceived or real differences. In Kenya there were many individuals whose lives were saved by a donation from their very political opponents. The conflict was fuelled by ethnic hatred and mistrust mostly of the Luo and Kikuyu communities from which the two presidential top contenders were drawn from. Blood became a rare unifying factor that transcended political and ethnic barriers and brought the reality of that despite our differences, we are one people.