Like a lot of people around the globe, you may have been stuck to the news while the crisis of Ebola happened during the summer of 2014. However, just now, combining together hundreds of interviews with the victims and survivors, can we really determine what occurred in West Africa.

However, there are still some mysteries, but as a result of genetic research and blood samples that were collected all through the outbreak a lot of answers have been found. Scientists have discovered exactly where the disease began, where it migrated to and how it transformed.

This book is the story of the people on the front lines, the comprises they did in an attempt to regulate a rising distressing occurrence and how this virus disturbs the actual behaviors that shape our humanity.

A caution before we start: These chapters have explanations of blood, death, miscarriage, and abortion.

The Ebola virus developed first in Zaire, Africa during the year 1976.

On the 9th of September 1976, a pregnant woman whose name was Sembo Ndobe got to the Yambuku Catholic Mission Hospital in Zaire, Africa –which is now called the Democratic Republic of the Congo. One of the nurses named Sister Beata started assisting the woman. She instantly noticed that the woman was having troubling symptoms, such as fever, swollen eyes and bleeding gums.

Sister Beata thought that Ms. Ndobe had a type of malaria or a disease called blackwater fever. While delivering Ms.Ndobe child, Sister Beata did what she does all the time– she did that with her bare hands.

However, this was not the usual delivery. Ms. Ndobe was bleeding profusely from her birth canal, and the bleeding got severe after Sister Beata brought out her stillborn child. Ms. Ndobe

died that same day as a result of blood loss and shock. This was not rare – because a lot of women in Africa died as a result of hemorrhage during childbirth.

But, five days later, Sister Beata started to feel really sick. Initially, she felt fatigued and later she had a fever. Immediately after, she was vomiting, she had diarrhea and extreme pain that moved from her abdomen to her spine. Ultimately, Sister Beata was projectile vomiting with blood in the vomit. Soon, her vomit turned from red to black. Her stool was becoming black. She was bleeding profusely, and her insides were crumbling.

On the 19th of September, Father Sango Germain a friend of Sister Beata's friend and colleague came to her bedside to perform her final ritual. By then, a rash had appeared across Sister Beata's torso, and she had a straight-face and mask-like face. Her eyes were already red and swollen. As Father Germain was praying, Sister Beata started to cry which made Father Germain cry too.

After putting the sign of the cross with his hands on Sister Beata's forehead, Father Germain cleaned his friend's bloody tears away with the exact cloth he used to clean his own tears. Sister Beata died immediately and Father Germain died 13 days after.

Soon, the Yambuku Catholic Mission Hospital was occupied with patients experiencing the exact symptoms as Sister Beata. Nurses started to leave, scared of this unholy disease. However, a nurse did manage to call for assistance.

Researchers at the Center for Disease Control in Atlanta, Georgia had a name for the strange disease after a virologist visited the village.

On the 23rd of September 1976, Jean Jacques Muyembe-Tamfun got to the Yambuku Catholic Mission Hospital to look for where filthy and practically were isolated. The beds were unoccupied and filled with bodily fluids. Basins were abandoned on dirty floors, occupied with bad substances. It was an upsetting sight.

Muyembe who was a virologist wasn't certain of the type of illness that had occurred in that area. He assumed it to be typhoid fever. He anticipated to test some patients, however, no one was present. The following morning, Muyembe was taken to see a young nurse who had just died.

Similar to the others, this woman had swollen red eyes, which eliminated yellow fever. Muyembe needed samples for testing, therefore, he got approval to cut up the woman and, with his bare hands, brought out a piece of her liver. After he washed his hands at a close pump, Muyembe got to know of another sick woman that was pregnant. Taking this woman's blood, Muyembe was shocked to realize that she seemed close to death. After a little needle poke, she started bleeding uncontrollably.

As soon as possible, Muyembe traveled with his samples to Kinshasa, the close place that has a laboratory. He immediately discovered that the disease was not bacterial, which eliminated typhoid. He then had this understanding that he had the disease himself, having dipped his hands in the dead woman's blood. As he was waiting for his result, Muyembe sent samples to the United States Center for Disease Control (CDC) in Atlanta, Georgia. CDC researchers initially gave this disease X Virus, however eventually at the end of October, they gave it an official name – Ebola.

In 1976, they succeeded to subdue the first Ebola outbreak; however, what they'd found was basically a disease that can cause a disastrous occurrence at any moment. It would take 37 years, however, Ebola would reoccur to cause disaster.

Ebola is a very contagious and deadly virus that reoccurred in West Africa's Makona Triangle in 2014.

An Ebola particle is about 80 nanometers wide, 1,000 nanometers long and has just six proteins. However, if one particle gets into your body, it can key onto a cell and immediately become an Ebola-particle production factory. Those particles will cinch on to more cells, and the process will keep going until your body is completely taken over.

Different from other viruses that attack just a part of your body, such as your sinuses or throat, Ebola attacks all the parts of your body excluding the skeleton and the large muscles connected to the skeleton. Leading to diarrhea, projectile vomiting, and blood hemorrhaging, Ebola is very contagious. As a matter of fact, one tiny drop of blood can have 100 million particles of Ebola. Touching the sweat of a person that is infected can cause infection.

Ebola is also called an emerging virus, which signifies that it can be transmitted from animals to humans. This is exactly what is thought to have occurred during the mid-December 2013 in the West African village of Meliandou. The village is situated in the Makona Triangle. This part is where you find the Upper Makona River, where three countries meet – Sierra Leone, Guinea and Liberia.

In Meliandou, a stream links to a pool where people can bathe and wash their clothes. On that particular day in December, a woman called Sia Dembadouno was at the pool. Her two-year-old son Emile was playing around an old tree at the bank of the pool. The tree was empty, with a hole and bats sleep at the base.

On that particular day, the kids ignited a fire in order to smoke out the bats, something they would normally do. People in the village regularly hunted, cooked and ate bats and rats in that place. No one knows precisely the next thing that occurred. Perhaps, Emile was bitten by a bat or a bat fly, an insect that eats bats and could have exposed Emile to bat blood.

Whatsoever happened, Emile became sick immediately, his diarrhea became black, and he died on the 28th of December 2013. A week after, Emile's sister died, and afterward, his mother died and then his grandmother. The village midwife, who'd been taking care of the family, became scared and went to a local hospital in Guinea. She also died, with the medical worker who treated her. The virus was starting to spread.

As the virus occurred, the Kenema Government Hospital attempted really well to subdue the disaster.

During March 2014, the virus was gone from the village of Meliandou. A family member of the midwife was also infected, as well as the mourners at her funeral.

During late February, a woman named Sia Wanda Koniono from the village of Kpondu in Sierra Leone went to Kissidougou, Guinea. The passenger that sat next to her was sick and sweaty. When she got back to Sierra Leone, she began to feel ill. Ms. Koniono's neighbor, a very respected healer called Menindor, tried to assist her.

Menindor understood the huge advantages the healing properties of plants has, however, nothing worked. On the 3rd of March, Ms. Koniono died. Her body was set for her burial by her five sisters, in which they later fell sick and died.

The Kenema Government Hospital is approximately 100 miles from Kpondu in Sierra Leone. Since it's has a level-4 biocontainment ward, this hospital turned out to be the main facility as the virus spread throughout the region. The hospital is famous for tackling the Lassa virus, which is similar to Ebola, also a level-4 virus that leads to fever and hemorrhagic bleeding. Nearly 300,000 people in West Africa suffer every year from Lassa. Also, similar to Ebola, there is no vaccine available or cure. The best thing they can do is separate and care for the patients in a biocontainment ward.

The Lassa ward is fully equipped with twelve beds and insufficient biohazard suits, which enables trained medical staff to go into the ward and treat patients. Also, there is an efficient hot lab, which is another biocontainment place where blood samples could be safely tested for the virus.

In the summer of 2014, the facility, staff, and resources of the ward were driven beyond their limit. However, in March, the facility's virologist named Dr. Humarr S. Khan was just starting to hear reports of a hemorrhagic fever epidemic around the Makona Triangle.

Khan notified his colleagues, and on the 13th of March 2014, the Brussels headquarters of Doctors Without Borders heard about the information and transferred an investigative team to Guinea. On the 23rd of March, it was declared that the blood samples collected were Ebola virus.

The exceptional features of the Makona Triangle caused a lot of difficulties in managing the outbreak.

The Makona Triangle contains villages scattered across the borders of three countries. But, they speak more than only three languages there. When the staff from the Kenema Government Hospital visited the area to check it, one of the members named Michael Gbakie could speak four languages namely Hrio, Mende, Kono, and English.

However, when they got to a village to treat a woman who had been confirmed to have ebola, the people spoke Kissi. Luckily, the ambulance driver who goes by the name Sahr Nyokor spoke Kissi and he was the interpreter. This language barrier was just one of the difficulties health officials experienced there.

A lot of the locals considered the people from Doctors Without Borders to be unreliable. What happened in the mysterious white tents they built was not known, and when these strangers in their biohazard suits took away their loved ones, they didn't see them ever again.

In the beginning, it was really hard for these teams of doctors to get in contact with the patients. When the team from the Kenema hospital came to the village of Koindu to check on an infected woman, the team was sent away with rocks and hardly escaped with their lives.

Also, the people in the villages had a traditional and valued means of bidding goodbye to the dead. They would clean and wash the dead body, saving and making use of the water they used to bath the death, that was inclusive of this ceremonial event. During the burial, it is normal for the mourner to touch and hug the person that just died.

When Menindor, the adored healer in the village of Kpondu, became sick and died, about 200 people went for her funeral. Surprisingly, 365 cases of infection would be linked to this incident. Within days, as people became ill and asked for assistance, the virus spread in every direction from the funeral of Menindor.

The virus basically takes advantage of human compassion and the wish to care for loved ones when they become sick.

As things deteriorated, the medical staff became sick and fear intensified.

During May, there were just a small number of patients at the Lassa fever ward in the Kenema Government Hospital. However, in June, they were beyond capacity. It was virtually impossible to maintain the quickly worsening conditions. Nurses saw a frequent horror show of anguish, death and worsening patients.

Patients were rapidly becoming double in beds. There was a risky scarcity of biohazard suits. To make situations worse, the virus began to spread to the staff members themselves. During the time while the team from the Kenema Government Hospital was going to another village, the person that drove the ambulance Sahr Nyokor went to see his friends at a close home. He didn't use a protective suit because he didn't want them to feel scared.

Unluckily, the home he visited was filled with Ebola particles. A few days after, Nyokor visited the Kenema hospital and he was being treated by a nurse named Lucy May, who didn't know that he'd been exposed. Shortly, Lucy May became sick and she was pregnant too.

Immediately, Lucy May was infected with Ebola and on the verge of death. Four nurses tried their possible best to assist her; however, Lucy was already bleeding from her birth canal. The leader of the nurse, Mbalu Fonnie, who was called "Auntie" by everyone was aware that the hemorrhaging instigated by Ebola and Lassa was alike. Both showed deadly to both pregnant women and their children. Without key measures taken, the child would probably die, and Lucy would likely die too. But, by terminating Lucy May's pregnancy, her own likelihood of survival would increase a lot.

As a matter of fact, the data displays that the Lassa emergency procedure offered pregnant women a 50% better probability of survival. Auntie had saved Lassa patients previously by doing this, and she planned to do anything she could to save her friend.

Auntie, as well as the other nurses, were probably aware that, even with their biohazard suits, this measure would really increase their risk of exposure. However, they all accepted to help. At the end of the operation, there was blood and fluid all over the table and also in their suits.

On the 3rd of July, one hour after the operation, Lucy May had a cardiac arrest and died. The three nurses who assisted Auntie screamed in pain.

When crucial personnel got sick, arguments about an experimental vaccine intensified.

Immediately after Lucy May died, Auntie was sick as well as the three nurses who'd assisted her in the operation. When Auntie died on the 5th of August 5, it was a traumatic shock to the whole hospital. There were more screams of pain when she eventually died. It looked as if the whole facility fell under a dark cloud of disaster.

A lot of staff members left their posts, making a manageable operation more serious. And then the unlikely occurred. The internationally well-known head of the Lassa and Ebola ward, Dr. Sheik Humarr Khan, became sick.

When Alex Moigboi who is one of his best-devoted nurses reported feeling sick, Dr. Khan had automatically touched the back of his neck, to check if it was a fever. Moigboi had been doing 12-hour shifts, waiting by patient's bedsides, relentlessly assisting them even under the worst situations. Khan suggested that he should rest. He understood later the mistake he'd done. With that touch, the virologist who had treated a lot of Ebola patients got infected with the disease himself.

When information spread that Khan had isolated himself in his apartment and that his blood sample was positive for Ebola, the international health-care community was struck with sorrow. Certainly, they believed, there should be something they could do to help.

It happened that, there were developing a few fascinating experimental vaccines. The most interesting was a drug named ZMapp, which had lately been evidenced in successfully curing all

the people of the 18 Ebola-infected monkeys during a trial. They put Dr. Khan in a Doctors Without Borders camp in Kailahun, Sierra Leone. A set of doses of ZMapp were reserved there to study how the vaccine survived the circumstances of West Africa.

However, administering the drug wasn't really easy. After officials pondered on the issue, the people in charge of the camp where Khan was treated were left to decide. They decided it wouldn't be ethically correct to administer Khan the experimental treatment. It might kill this famous person in Sierra Leone, and further shake the public, who were already sad with the organization. The camp officials also thought that it was unethical to give any treatment that wasn't available to everybody.

This judgment was controversial and it was criticized by some people, for instance, Khan's colleague named Michael Gbakie. In their justification, the people in charge of the Doctors Without Borders facility in Kailahun had been extremely traumatized by the ebola outbreak. They did their best to come up with the right decisions they could under the situations.

Although a lot of people died, some people challenged the possibilities and lived.

Dr. Khan died on the 29th of July, he was a national hero and loved by a lot of his colleagues. It ended up that, ZMapp would be effective in treating those affected with the virus.

An organization called the Samaritan's Purse, at the Eternal Love Winning Africa Hospital (ELWA) in Monrovia, Liberia controlled another Ebola ward on the front lines of the outbreak. Similar to the hospital in Kenema, this one was driven beyond its boundaries, and few of the staff had been infected with the virus.

The physician in control of this was Lance Plyler. He was dealing with the truth that two of his physicians Nancy Writebol and Kent Brantley were approaching death. The exact day that Khan died, the ZMapp package was delivered to Dr. Plyler's office. He had to deliberate on whether or not to give a drug that hadn't been confirmed on humans and if he did administer, which of his friend would he administer it to.

Also, Plyler was sorting the medivac transportation to take back one or both of his friends to the United States. After a tormenting time of thinking, as both of his friends were close to dying, he decided to divide the drug between his two friends. Plyler was surprised when he saw Kent Brantley stand up and walk to the bathroom only an hour after he received his portion of the first dose.

But, Nancy Writebol's dose didn't have the exact effect as Brantley's one, however, it enabled her to survive the night. Both of them were taken to Atlanta, Georgia, where they got the remaining of their ZMapp course and recovered completely.

The strain of the Ebola outbreak in West Africa that summer was called the Makona strain. The research that was done on its genetic code and the impact it had on people that it affected assert that it was the most dangerous strain of Ebola identified by science. However, two of the nurses that assisted Auntie to save Lucy May survived the attack of Ebola. Also, Auntie's brother named Mohamed Yillah who is an epidemiologist at the Kenema hospital, and Alex Moigboi who was Dr. Khan's dedicated nurse survived.

Similar to 1976, the 2014 virus lessened when people started to change how they behave.

Another incredible survival story is the story of Jean Jacques Muyembe-Tamfun, the virologist who discovered Ebola first in the year 1976 in Zaire. With all consideration, having his hands full of the blood of an Ebola victim should have certainly led to an infection, and still, he didn't get infected. He became one of the most esteemed medical teachers in the Democratic Republic of the Congo.

Dr. Jean Francois Ruppol is another man who is worthy of praise for putting an end to the 1976 outbreak, he was a medical director that was working for the Belgian government. On the 28th of September, he was summoned to assist in the quarantining of the place. He performed this by using the Ancient Rule.

The citizens of Zaire were really accustomed to the Ancient Rule. Back then, during the times of smallpox, it specified that if a family member got ill from a contagious disease, they were put out of the village in a hut with food and water. If they endured from the illness, they were received back, but if they didn't survive and died, the hut, as well as the person in it, were burnt.

Unluckily, in 2014, it took quite a long time for the people in other regions of West Africa to admit that they had to do just that. This needed their behavior to change and doing the opposite of all they'd learned up to that point. They could no longer do their traditional funeral rite or care for their loved ones.

However, West Africans actually changed their behavior, which made the outbreak eventually drop. During the beginning of October 2014, there were already 9,200 cases and 4,500 deaths. However, at the end of October, there were no new cases reported from the Makona Triangle. Things had eventually changed. Eventually, the outbreak would result in 30,000 cases and more than 11,000 death. It took Guinea, Liberia and Sierra Leone to the edge of ruin.

All thanks to the teams present in these countries, samples were collected all through the affliction. There is now more understanding of the genetic code and how Ebola functions than ever before. Researchers were able to trail the virus fully and watch how it changed to more competently attack human cells.

Luckily, human beings can change as well and due to that, and our ability to compromise and work with one another, we are better equipped for what it is to come.

Crisis in the Red Zone: The Story of the Deadliest Ebola Outbreak in History, and of the Outbreaks to Come by Richard Preston Book Review

The Ebola epidemic that happened in West Africa in 2014 was the outcome of an extremely efficient and contagious disease that can infect humans with only one particle. The Ebola virus exploits our compassionate human nature and the wish to care for our loved ones. Therefore, the disease is hard to tackle. The outbreak took a huge toll on countries like Sierra Leone, Guinea and Liberia. It was just when people accepted to quarantine their loved ones and trust the medical community, that was when the outbreak decreased

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