

## Rwanda's fight against AIDS

Almost there – with the help of education and medical care

Rwanda is one of the countries in the world that has made particularly great progress in the fight against AIDS. The country relies on a variety of measures. Because this is the only way to defeat the disease.



Free AIDS test for everyone - on World AIDS Day in the capital Kigali, Rwanda (imago / Xinhua / Gabriel Dusabe)

Emerthe Mukamana turns off the main road into a narrow lane. It leads to one of the slums of Rwanda's capital Kigali - beyond the high-rise buildings and well-kept districts. Here in Gatsara live those who have not yet participated in the awakening and progress of the East African nation. But that doesn't mean they have been forgotten, emphasizes Mukamana. For example in health care. Every citizen in Rwanda is entitled to this. For example, people who are HIV-positive, i.e. people who have contracted the virus, receive antiretroviral drugs free of charge. They maintain the function of their immune system and thus prevent AIDS, the disease, from breaking out. They are also supported by so-called "peer educators". Mukamana is one of them, she volunteers to take care of sex workers.

### Peer educators provide information and help

"I make sure they take their medication regularly. And I'll bring them to you if you can't pick them up. I also clarify: I tell them that an HIV infection is no longer a death sentence. The importance of knowing your HIV status, using condoms, getting regular check-ups and having viral load tests, which is the number of viruses in your blood. And I encourage them to come to one of our support groups so they don't stay alone and fall into depression."

The woman in the slum who visits Mukamana lives in one of the many small houses. Children are playing in front of the door, inside potatoes are cooking on a fireplace – the only meal of the day. The two women hug, then sit down on plastic chairs.

The 35-year-old hands Mukamana her health card. She writes down when she takes her medication. Ever since she found out that she is HIV positive, she has been doing it regularly.

“Five years ago I went to the clinic for a pregnancy test. There I not only found out that I was HIV-positive, but also had AIDS, so the disease had already broken out. I received medication the same day. It was the doctors who sent Emerthe to me. Since then she has been taking care of me, bringing me medicine and answering my questions. I don't know what I would have done without her help. I feel healthy and both of my daughters were born HIV negative.”

## Low rates of transmission from pregnant women with HIV to their babies

Transmission of the virus from mothers to their children is now rare in Rwanda. It is less than two percent. This is one of the achievements of the nationwide HIV program. Eric Remera remembers the beginnings. The doctor heads the HIV department at the Rwanda Biomedical Centre, an agency that puts the Ministry of Health's plans into practice.

“The national program against AIDS was launched in Rwanda in 1987 - four years after the first case was reported. But all efforts were dashed in the wake of the 1994 genocide against the Tutsis. Almost a million people were killed and an estimated 500,000 women were raped. You need to know that HIV has also been used as a weapon against Tutsi women. Almost two million people were fleeing at the time, and almost 25,000 children were orphaned. After the genocide, the focus was initially on reconstruction. There were a lot of infections and deaths back then because there was no HIV medication, no treatment.”

## Access to medicines for all infected since 2016

Drugs became available in African countries much later than in industrialized countries. In addition, the high prices represented almost insurmountable hurdles. Rwanda was only able to start antiretroviral treatment in 2004 and initially only in a dozen medical facilities. Since 2016, however, every infected person has had access to life-saving medicines. A milestone. Mainly because Rwanda finances most of the medication and treatment itself. Child mortality has fallen drastically since then, and life expectancy has risen by decades. However, the treatment with the drugs is not the only key to success, emphasizes Remera.

“In the first few years it was about education. We have set up a commission to fight HIV, and researchers have drawn up guidelines. All measures were implemented locally in the clinics. Rwanda was one of the first countries where not only doctors but also nurses were trained for treatment. Then there are the peer educators who make sure that people get tested and continue their treatment. This leads to a suppressed viral load, i.e. a low number of viruses in the blood, which in turn reduces the risk of infection. Political will is also crucial – the healthcare sector working together with civil society and local authorities.”

Because of this joint effort, Rwanda is now one of the countries in the world that has made particularly great strides in combating the infectious disease. 2.3 percent of adults in Rwanda are HIV-positive, more than 90 percent of them know their status, take medication and have a suppressed viral load. That's what the United Nations Program on HIV/AIDS, or UNAIDS for short, says.

## South Africa - World's most HIV-positive people

A look back: In 1981, AIDS was recognized as an independent disease in the USA, and the virus was detected a few years later. Since then, more than 84 million people have been infected with HIV worldwide and more than 40 million people have died from it. Despite many efforts, the disease is

still not curable, but it can be treated. By far the most HIV-positive people live in eastern and southern Africa. The number of new infections is also higher in these countries than in other regions of the world – Rwanda therefore stands out as a positive example.



Prevention work against HIV/AIDS, here in Cape Town, South Africa (picture alliance / Imagebroker)

According to the goal of the United Nations, by 2030, AIDS should no longer pose a threat to public health worldwide. Quarraisha Abdool Karim emphasizes that all countries would have to adapt their strategy in order to achieve this. She is a leading HIV researcher from South Africa - the country with the most HIV-positive people in the world - and she sits on the UNAIDS Steering Committee.

“We must now try to reach all those we have not yet reached. It's like a 100-mile long-distance run, the first 90 miles are very different from the last 10. So as we celebrate our achievement of covering the greatest distance, we must consider how we will cover the remaining miles. The solution approaches differ from country to country. The measures must be adapted to the local situation, be relevant and more targeted than before.”

### HIV researcher: Adapting measures to the local situation

For example, in the United States, where an estimated 1.2 million people are HIV-positive, there are two population groups most at risk of infection: people who inject drugs and men who have sex with men. So far, the measures have mainly reached white men, they now have to include people of color more.

“The typology of the epidemic varies greatly around the world. In sub-Saharan Africa, where we record 70 percent of the world's infections, it is a generalized epidemic. So it affects everyone, but there are parts of the population, key populations, in which the number of new infections and deaths is particularly high because the health services do not reach them.”

Countries like Rwanda are therefore now concentrating their prevention and care measures primarily on these population groups. According to Eric Remera, an important tool is the so-called pre-exposure prophylaxis, PrEP for short. These drugs protect HIV negative people from infection.

“We give this prophylaxis to key populations: sex workers, men who have sex with men, and couples where one is positive and the other is negative. But young women who have a higher risk of becoming

infected can also take this prophylaxis. At least 80 percent of those who need this protection get it. Taking it is voluntary, after all we are talking about a drug that has to be taken for life.”

## Network of peer educators takes care of those affected

The civil society network for people living with HIV, or RPP+ for short, has set up its center not far from Remera's office. Here, in the heart of Rwanda's capital, Kigali, the peer educators meet regularly to exchange ideas. During the Covid pandemic, her volunteer work was particularly important, emphasizes Sage Semafera, head of the network. During the lockdown, they not only distributed medication and self-tests, but also defuse conflicts.

“There have been cases of gender-based violence because previously hidden HIV infections became known in families. There were also problems in boarding schools and dormitories when the HIV status became known involuntarily. Another group that needs support are members of the LGBTI community. Lesbian women, men who have sex with men or transgender people already suffer from a stigma and this is compounded by HIV infection.”

To ensure that everyone is really reached on the last few miles in the fight against HIV and AIDS, the network has set up an anonymous hotline that can be reached every day from 7 a.m. to 6 p.m. Two young volunteers answer questions, such as what needs to be considered when taking antiretroviral medication, or which clinics are recommended. They want to remain anonymous, just like the people they advise.

“I am motivated by the wish that at some point there will be no more new infections here in Rwanda. And that HIV-positive people are no longer stigmatized. A lot has changed with regard to LGBTI people. We can move freely in public without being openly attacked. People hold back because the government prohibits any form of discrimination. However, there is still a stigma due to traditional and religious beliefs. That’s why our network is so important: we educate, we have peer educators in the LGBTI community, go to families and try to show others that we are people like them.”

## Teenagers and young women are particularly affected worldwide

Those who are not afraid of being attacked or excluded, who do not stigmatize themselves, i.e. blame themselves for their own infection, have fewer inhibitions about going to a clinic. This increases the proportion of those who know their status and seek treatment, and the risk of infection decreases. This is not only the case in Rwanda, but in all countries of the world. Discrimination and social inequality, on the other hand, are seen as drivers of the HIV pandemic. Young women under the age of 25 are particularly affected, according to the HIV scientist Quarraisha Abdool Karim from South Africa. In 2021, according to UNAIDS, one teenager or young woman will be infected with HIV every two minutes worldwide.

“We are now in the fourth decade of the pandemic. And we should admit that fundamental structural problems are also at work here, fundamental inequality and injustice. They are responsible for the fact that women are disproportionately affected. It's about issues like gender norms, gender-specific violence, patriarchal power structures. It is no coincidence that one in four infections in sub-Saharan Africa still affects young women.”

Abdool Karim demands that young women need more access to prevention and a greater choice of methods to protect themselves. As a scientist at Caprisa, South Africa’s leading research institute, she

was instrumental in the development of an antiretroviral vaginal gel. In order to break the chain of infection, however, it is just as important to persuade young men to be tested and treated.



The mortality rate has fallen due to the success of anti-AIDS drugs. (picture alliance/ dpa – Frank May)

“A few years ago, we traced the cycle of transmission by sequencing the genome of viruses from newly infected people. We have been able to show that men over 25 infect younger women - this is a feature of the epidemic in sub-Saharan Africa. Through a testing campaign, we found that about a third of men are newly infected with HIV. This means that the viral load and the risk of infection are particularly high. But these men don't usually get tested because they feel healthy. They fall through the cracks in the healthcare system. This is a major challenge that requires new strategies. Because if these men know their status, then this also has an effect on the infection rates among young women.”

### Social inequality increases infection rates

The Covid pandemic, which put large parts of the world in a state of emergency, was a major setback for the fight against HIV: significantly fewer people took an HIV test or started treatment during this time. UNAIDS counted 1.5 million new infections worldwide in 2021, and one person died every minute as a result of the AIDS pandemic. Social inequality has also become even more obvious, emphasizes Abdool Karim.

“While Corona is increasingly reaching endemic levels and vaccination is available, there is still unequal access to it. In the shadow of the Covid pandemic, climate change is also having a massive impact on health. More and more people are fleeing, often interrupting their HIV treatment. Covid should have shown us that we are all interdependent, that any pandemic can only be defeated together. We must strengthen health systems worldwide and leave no one behind. Otherwise it will remain a "we and them" and we will still be having this conversation decades from now. We have the tools to achieve the 2030 target for HIV. The question is whether there is also the political will to do so.”

### Hope for a vaccine against HIV – from Africa

But one hope was nurtured by the Covid pandemic: that of vaccination, given the breakthrough in mRNA technology. However, scientist Abdool Karim warns against exaggerated expectations.

“There are many challenges in developing an HIV vaccine. While there is hope with mRNA technology, I have higher hopes for the so-called broadly neutralizing anti-HIV antibodies. They protect against different strains of HIV and have been found in some people around the world. We are still researching how they evolve, to what extent they protect, and how we can mimic this process. It's a much smarter approach to vaccine development.”

The corona pandemic has taught the African states something else: The vaccine was distributed unequally around the world, which is why they are now in the process of setting up their own vaccine production. It is of central importance for them to produce an HIV vaccine in the future. Eric Remera from the Rwanda Biomedical Center:

“In epidemiology there are different preventive measures, but the primary one is vaccination. With an HIV vaccination, we could reach the goal of ending AIDS more quickly. It would be a great achievement for our AIDS program and for the world.”