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SA volunteers ready for huge HIV vaccine trial

A pioneering initiative that builds on earlier successes could open a new chapter in the history of Aids in South Africa

By Anthony S Fauci and Glenda Gray

We have spent our careers caring for patients with HIV/ Aids on both sides of the Atlantic, witnessing the burden of this disease in our communities and around the world. The stories we have witnessed transcend generations and continents.

Yet, even though HIV/Aids has destroyed countless lives directly and indirectly, there is also a story of hope to be told. This is a story of how modern medicine has helped turn the tide against this pandemic and still is developing powerful tools to further combat this disease.

This month, we begin to write a new chapter in our collective story of hope. South Africans will unite to embark on a pivotal clinical trial testing the efficacy of an HIV vaccine.

The study, called HVTN 702, is an unprecedented effort unfolding on South African soil: 5 400 volunteers will receive an experimental vaccine to determine if it protects against HIV infection.

The start of this trial is the culmination of years of research and development, solidified by the strong relationships built between South African and international scientists for almost two decades.

Since the first attempts to develop an HIV vaccine began in the 1980s, many vaccine candidates have been tested to determine if they could offer protection against HIV infection.

Even though no study has yet delivered a substantially effective vaccine, each effort has enhanced our understanding of this elusive, persistent virus and has informed the development of better strategies.

In 2009, a glimmer of hope appeared. After more than three years of testing, a large HIV vaccine trial conducted in Thailand demonstrated a 31% reduction in HIV infection in those participants who had received the vaccine compared to those who did not.

This was the first large clinical trial to demonstrate any degree of efficacy for an investigational HIV vaccine.

Now, seven years later, a coalition of partners working across public and private sectors is embarking on an attempt to improve on the results of the Thailand trial, with a promising vaccine candidate specifically designed for South Africa.

This vaccine and trial design build on lessons learnt from the modest protective effect demonstrated in Thailand. It will take at least four years for HVTN 702 to yield enough data for scientists to determine if the regimen prevents HIV, and how powerful that protection may be.

In South Africa, where more than seven million people are living with HIV and 1,000 are infected each day, even a moderately effective vaccine could significantly reduce this unacceptable burden of disease over the long term when offered together with other proven prevention tools.

These tools include antiretroviral therapy for all people living with HIV/Aids to prevent transmission to others such as sexual partners, condoms, voluntary medical male circumcision, and pre-exposure prophylaxis, which is an intervention for uninfected individuals now becoming available in South Africa, involving a single pill taken daily to prevent HIV infection.

We applaud the true heroes of HVTN 702: the thousands of individuals who will volunteer to participate, the researchers and clinic staff caring for them.

Together, we will work towards an end to the HIV/Aids epidemic, remembering the lives already lost, and celebrating the hope that we may prevent future infections in our children and in generations to come.

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