



OFF THE CUFF

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Local research is best way to solve a public health problem

Africa is plagued by many epidemics — from tuberculosis and HIV/Aids to malaria and wild polio — but the continent has also worked for decades to fight these threats.

The key to beating these deadly diseases is turning inward to existing expertise and finding locally driven solutions.

The recent Covid-19 pandemic has placed public health back in the global spotlight and has also served as a reminder that science is not undertaken in an ivory tower.

Science shapes humanity because it takes place among us. Covid-19 has also showcased that no epidemic takes place in isolation. Through collaboration, we can build on the foundations of our knowledge to bring forward innovative ways to address health challenges that benefit all of humanity.

This is not a new idea. In fact, it is something that we became all too familiar with during the Aids pandemic.

Despair, pain and loss were rampant during the 1980s and early 1990s, at the beginning of South Africa's HIV epidemic.

Every weekend, funeral tents in rural KwaZulu-Natal seemed to mushroom and multiply, signifying the growing toll the virus was taking on the country.

Witnessing this helped to catalyse me to undertake one of the earliest population-based studies that looked closely at this emerging health issue in South Africa.

HIV prevalence was low at the time, with less than 1% of the population infected.

But lurking within the data was a shocking revelation: young women (15 to 24 years old) were six times more likely to be infected compared with their male counterparts.

African solutions to African problems

Something had to be done. That meant understanding what had led to this striking disparity in risk. So, we began speaking to women from all parts of society to get a better sense of what they were experiencing.

Here's what we learned: power dynamics of relationships and sex were disrupting disease prevention. Women didn't have the ability to protect themselves because of the limited options available to them — options such as condoms placed the responsibility of reducing risk in the hands of men.

Cases, meanwhile, continued to surge in SA, doubling annually.

Existing methods to prevent HIV infection weren't going to cut it. Approaches designed in the Global North were never going to be able to account fully for the needs of women in Africa. That's why new solutions had to be brought forward instead.

One way that we sought to empower women was with a gel that contained Tenofovir, an antiretroviral (ARV) medication.

This approach, shown in a Centre for the Aids Programme of Research in South Africa (Caprisa) trial, enabled HIV-negative women to protect themselves from the virus.

The centre's research on pre-exposure prophylaxis (PrEP) was recently recognised by the VinFuture Prize as a lifesaving innovation from the Global South.

Today, Tenofovir is taken daily as a pill for HIV prevention. It has been adopted by the World Health Organization (WHO) as a key prevention option for both women and men.

And it hasn't stopped there. New ARV drugs and long-acting formulations, delivered as injections and implants, are being evaluated to expand prevention choices.

No time for complacency

Aids is no longer a fatal condition; instead, it is chronic yet manageable. But we still see too many deaths and new HIV infections, particularly in marginalised populations.

Two-thirds of all people living with HIV Aids are in sub-Saharan Africa. The region accounts for 60% of all new infections.

As we turn our focus towards other pandemics, such as Covid-19, we cannot afford to lose the gains made in HIV. It is a trap we fell into before — when early HIV work overshadowed TB efforts — and it is not one we can afford to be caught in again.

Even now, Covid-19 continues to draw out lessons from the decades of work that have been poured into our HIV/Aids response.

The Aids pandemic has taught us that scientists, policy-makers and civil societies cannot work in a vacuum. There must be a unity of purpose that galvanises the support of global leaders in governments and funding agencies across the world.

Africa has the scientific leadership and intellectual capital to develop new technologies and interventions.

This is something we have shown time and time again. If there is a problem, the local research is surely the best path toward finding a solution.

Pursuing this path of innovation requires funding that will support and promote the growth and expertise of Africa's scientists.

Our interdependency and shared vulnerability underscores the importance of collaboration and resource-sharing, both globally and regionally, that must be used for the benefit of humanity. We must ensure that solutions are tailored by local research to best benefit those in need.

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