

Game changers to end TB

SA's TB Think Tank puts the country's brightest minds at helm of its TB response

Academics, civil society members and officials are taking new approaches to an age-old problem

Di Caeters

South Africa is slowly beginning to turn the tide on the tuberculosis (TB) epidemic and leading the way is a panel of thought leaders pioneering a new approach to tackling one of the country's biggest health issues.

The country's TB Think Tank brings together experts from the government, academia and civil society to assist in guiding the country's TB response.

The think tank is the brainchild of Yogan Pillay, the health department's deputy director-general for HIV, TB and women's and child health. From there, the TB non-profit organisation Aurum Institute helped put the idea into action with funding and support from the Bill & Melinda Gates Foundation and the World Health Organisation (WHO).

Aurum Institute chief executive Gavin Churchyard says the institute fleshed out Pillay's vision by creating three main working groups within the think tank. Today, specialists are divided between sub-committees that work on modernising approaches to TB; service delivery and monitoring; and new tools including TB diagnostics, drugs and vaccines.

Pillay says the think tank's real strength is that it harnesses South Africa's often underutilised wealth of expertise and their research findings to inform decision making.

With better data come better and more successful interventions.

In its first two years, the TB Think Tank and its partners generated and collated evidence that contributed to



A child receives treatment at Cape Town's Brooklyn Chest Hospital. Thanks to guidance from South Africa's TB Think Tank, the country is rethinking how to reach those most vulnerable to TB, such as children, with better prevention, care and treatment. Photo: David Harrison

the creation of the country's first HIV and TB investment case study, which mathematically modeled current and future funding needs to address the twin epidemics. This research not only highlighted gaps in current TB programmes but also helped the health department identify key interventions in the fight against TB likely to yield the most benefit.

Recommendations from the expert group have led to increased funding to fight TB at the local district level. The team also worked to introduce ring-fenced funding for the disease to ensure money goes where it is needed. Funding for HIV is already protected in this way.

The think tank is similarly behind changes to health department guidelines to make sure that people most at risk of TB, such as children and people living with HIV, receive the screening and treatment they need to prevent TB.

Francesca Conradie is a clinical advisor with the nongovernmental organisation Right To Care and a panel member specialising in drug-resistant TB. She credits the think tank with putting South Africa at

the fore of introducing new and better drugs to treat forms of TB that are resistant to commonly used medicine.

In 2014, the health department began piloting a new drug called bedaquiline among a small number of patients with extensively drug-resistant (XDR) TB as part of what it termed a clinical access programme.

XDR-TB is resistant to both of the most common anti-TB drugs as well as at least half of the most commonly used second-line drugs. Treatment for the condition lasts about two years and includes handfuls of daily pills and injections. Up to one-third of treated XDR-TB patients will also lose their hearing as a result of side-effects from existing injectable drugs, Conradie told Bhekisisa in February.

Under the leadership of expert doctors like Conradie, the pilot found that 60% of XDR-TB patients that were given bedaquiline as part of treatment were TB-free after two months, according to research presented at the 2015 SA TB Conference.

Today, South Africa leads the world in the number of patients with drug-resistant TB that have been able

to access bedaquiline, Pillay told Bhekisisa last month.

Conradie explains: "This drug looked really promising in clinical trials, and the access to the health department via the think tank meant I could take it to them and ask them to look at implementing it more widely. We've seen a really significant jump from 100 patients in 2010 to about 4 000 now using the drug. The results have been so significant that we now refer to treatment regimens as pre- and post-bedaquiline. It's been very good news, and we've seen our patients able to return to the workplace."

As of earlier this year, South Africa now accounts for more than half of those receiving bedaquiline globally, according to figures from the international humanitarian organisation Doctors Without Borders (MSF).

The think tank is also behind the country's move to roll out the kind of rapid testing that is crucial for allowing patients with TB to be diagnosed quickly and accurately. Today, automated machines called GeneXperts can diagnose TB and drug-resistant TB in a matter of hours. The technol-

ogy has replaced outdated methods of diagnosis for drug-sensitive TB that relied on microscopes and the human eye to detect tuberculosis bacilli.

Pillay says that the launch of the new national strategic plan for TB in Bloemfontein later this month offers South Africa an opportunity to accelerate the progress already made. The think tank contributed to the strategy, which will guide the country's response until 2022.

"That plan lays out a strategy to address the gaps in each phase of TB care, via interventions based on the latest data, that have been shown to work. Interventions are focused on points during an individual's experience with TB, where they might drop out of the system," he says.

In the fight against TB, South Africa has moved from "playing catch-up" with the world to a forward-thinking country leading the way in new approaches to diagnosing and treating the disease, Pillay argues.

But he warns that to end TB as a public health threat in South Africa, high levels of commitment and engagement at all levels are essential.

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University Symposia to commemorate World TB Day 2017 Join one of the four conversations to END TB

Event 1: Report from the 2017 Conference on Retrovirus and Opportunistic Infections

Date: 23 March 2017

Time: 12:30pm to 2pm

Venue: Centre for Infectious Diseases, Attie de Kock Seminar Room, 3rd floor, Clinical Building, University of Stellenbosch Medical School, Francie van Zijl Drive, Stellenbosch

Contact: Jean Nachega: jnachega@sun.ac.za

Event 2: Meeting the challenge of drug-resistant tuberculosis: 3-day course for health professionals

Date: 24 to 26 March 2017

Venue: Faculty of Health Sciences, Wolfson Pavilion Lecture Theatre, University of Cape Town, Anzio Road, Cape Town

Contact: Dr Wynand Goosen: wynand.goosen@uct.ac.za; Prof Keertan Dheda: Keertan.dheda@uct.ac.za

Event 3: TB: current and future prospects

Date: 24 March 2017

Time: 9am to 12pm

Venue: Kine 5, Francois Retief Building, University of the Free State, Bloemfontein

Contact: Dominique Goedhals: gnrvdg@ufs.ac.za; +27 (0)51 405 2834

Event 4: Minimising your risk of contracting TB: some practical guidelines

Date: 23 March 2017

Venue: Medical Boardroom, 1st floor, Nelson R. Mandela School of Medicine, University of KwaZulu-Natal, 719 Umbilo Road, Durban

Contact: Sr Jali: jalin1@ukzn.ac.za