

Health & Science

New hope: Battles begin to turn in long war on TB

‘TB has been killing millions of people for thousands of years’

THE HAGUE: It kills millions of people and is carried by a quarter of humans, yet there has been just a handful of new drugs in decades and the only vaccine is a century old. Tuberculosis, a curable and preventable lung infection, killed more than 1.6 million people last year — almost as many as HIV/AIDS and malaria combined — and is the world's deadliest infectious disease. But despite possessing the knowhow to treat it, and even how much it would cost to eradicate, global efforts to rid humankind of one of its oldest illnesses lag behind other public health drives.

“TB has been killing millions of people for thousands of years and it's a slow-moving disease. You can get infected and never get sick, or not get sick for decades,” said Ann Ginsberg, senior technical adviser at IAVI, a non-profit that works on tuberculosis. “You don't see it. Even when you get it, you get cough, fever, some night sweats. It's not spectacular.” The World Health Organization says 10 million people developed tuberculosis in 2017 and global infection rates, while declining, remain stubbornly high.

But this year has seen several breakthroughs, including trials of a new vaccine and a pill that shows astonishing success against drug-resistant forms of the bug, which experts say are cause for optimism. More than 3000 scientists, activists and disease survivors gathered this week in The Hague for an annual conference on lung health that was dominated by advances in the battle against tuberculosis.

Several countries, including South Africa and Belarus showed that a new drug, bedaquiline, was consistently successful in patients with drug-resistant tuberculosis — in some cases curing 80 percent. Adrian Thomas, vice president of global public health at Johnson & Johnson, which holds the patent on bedaquiline, said the drug could revolutionize how some TB is treated. “It means you don't have the cost of the injectables, you don't have the administration, which has to be by a healthcare professional, and you don't have the toxicity, but you get the advantages in terms of mortality,” he told AFP.

Vaccine hope

Previously, those suffering from multidrug-resistant TB would have to undergo an eight-month course of excruciating injections, often several times a day and with severe side effects, including hearing loss in around half of patients. “At the end of that process they would often say that dying would be easier than actually taking the drugs,” said Thomas. Ahead of a recommendation by the WHO that more multidrug-resistant patients should receive bedaquiline, this year Johnson & Johnson dropped its price to \$400 (350 euros) per course of treatment.

For Sharonann Lynch, HIV and TB policy advisor at Doctors Without Borders, that's still too high. Her organization wants bedaquiline to cost \$1 a day, half the current price. “They say they are losing money but one third of the cost goes on funding to health system strengthening,” she said. “Why in the world would sick people need to pay for health system strengthening? That should be the responsibility of governments.” Thomas said that due to how it is funded and distributed, most people with access to bedaquiline who need it don't pay for the treatment themselves.

Despite its deadline, there has been just a single widely used vaccine against TB for nearly 100 years. But this too may be changing. Last month drugs giant GlaxoSmithKline unveiled a study of a new vaccine that was effective in 54 percent of trial participants. It comes with caveats — the trial was only on people in three African countries who already had tuberculosis but weren't yet sick from it — and is in its early stage, but Ginsberg described it as a “turning point”.

Marie-Ange Demoitie, who leads the vaccine development for GSK, said the eventual aim would be to give it to everyone of a certain age in areas where TB is prevalent. “There are several candidate vaccines at the moment but this is the first time we see a positive signal in a population of adult subjects,” she told AFP. “It's really a breakthrough and is bringing a lot of hope to the TB vaccine field.”



A digitally colored scanning electron microscopic image depicts a grouping of blue-colored, rod-shaped Mycobacterium tuberculosis bacteria which cause tuberculosis in human beings.

‘TB isn't sexy’

Last month UN member states held their first ever summit on tuberculosis and pledged billions of dollars towards tackling the disease. They aim to eradicate it within 15 years. The WHO estimates TB costs the global economy more than \$20 billion annually, nearly half of that going to treating patients. Ginsberg questioned why more wasn't being spent on preventing the disease in the first place. “Developing a vaccine costs roughly \$1 billion

over 20 years. So the investment that's needed is a small fraction of what we spend on an annual basis,” she said.

For Kitty van Weezenbeek, executive director of The Hague-based KNCV Tuberculosis Foundation, TB has been wrongly overlooked in favor of higher profile diseases. “TB's on nobody's mind. There's nothing sexy about it,” she said. “Ten times the research funding is going to HIV. I'm not saying it shouldn't go there, the point is it should also come to TB.” — AFP

Poor Ivory Coast pupils' ray of hope: Solar backpacks

ALLEPILLA: The equatorial sun has been up for about an hour as a gaggle of children set off from the Ivorian village of Allepilla on their hour-long trek to school. Back home in the evening, eight-year-old Marie-France Amoandji Ngbessoo does her homework by the light of her backpack's LED — captured by solar panels on her way to and from school. The light can run for three hours.

With insects flitting overhead, Marie-France points to the pictures in her textbook, identifying them: “Orange, plane...” Allepilla, some 100 kilometers north of the West African country's economic capital Abidjan, is a rural community centered on cocoa and coffee production. A single pump supplies water to the village of around 400 inhabitants including 150 children, and, as is the case for thousands of villages and hamlets across the country — there is no electricity.

Instead, oil-burning storm lanterns and battery-powered torches are the only sources of light. An Ivorian charity that promotes education for rural girls, Yiwo Zone, has raised funds to provide the backpacks — which cost 13,000 CFA francs (20 euros, \$23) apiece — to schoolchildren across Africa. Computer salesman Evariste Akoumian had the idea for the solar backpack in 2015 when his car broke down as night was falling near Soubre, in the southwest of the country.

“At the same time, children were returning home

from school,” he recalls. “I said to myself, ‘We must give them light so they can study. It's not normal for rural children to be unable to do so.’” The Ivorian government has set a target of ensuring electricity to 80 percent of the country. “These rural children are poor. They use rice sacks or plastic bags to take their things to school,” Akoumian said. “The idea was to kill two birds with one stone: give them a backpack with a light to go with it.”

The entrepreneur stressed that the solar backpacks belong to the children: “So Dad or Mum can't come and take the light from them... to use while they are cooking or doing housework.” Sales are brisk and have reached 55,000. Akoumian's company Solarpak already sells the backpacks in Gabon, Madagascar and Burkina Faso, as well as to charities in France and Germany. Striving to keep up with demand, Akoumian is seeking aid or loans so that he can set up an assembly plant in Abidjan and boost production.

‘Better marks’

“It may seem cheap, but these are large sums that the villagers don't have,” said Anna Corinne Menet Ezinlin, head of Yiwo Zone. “Here in this village some people can't afford the school fees or even notebooks. Usually school is free, but there are always registration fees or (other) payments.” Last year, Marie-France's 13-year-old sister Lucienne could not attend school at all because their mother was off work with an illness.

“It's hard for the children,” said village chief Jean-Baptiste Kotchi Okoma, whose seven-year-old daughter Nathania received a solar backpack. “There's not enough money here.” He added: “I hope their marks will be better. Children are disadvantaged here. With the backpack, I hope they will all progress.” Lucienne, flipping through a book, said: “I am happy. Before it was more difficult. It's easier now, with the backpack.” — AFP

37% of VSBs have been infected with ransomware

DUBAI: Small companies with under 50 employees have to deal with cyber threats like everyone else, but unlike larger firms, they might not be able to prioritize IT security, with their focus being primarily on business growth. To help these companies, the next generation of Kaspersky Small Office Security provides out-of-the-box protection from cybercrime that doesn't require hands-on administration or technical expertise. While keeping businesses safe from malware, financial fraud, phishing and other threats, the updated version provides extended server protection, and helps to keep applications updated, so that unpatched vulnerabilities do not let threats infiltrate business networks.

Nearly a third (32%) of VSBs entrust the task of cybersecurity to employees that don't have expertise in the area. Therefore, it's crucial for these firms to implement an easy-to-use solution that can be deployed and managed by virtually anyone in the company. The new Kaspersky Small Office Security can now be installed in a few minutes. If businesses need more control, the web console gives them all the information they need about how the product is being used (including information about licenses, users and their devices, product versions installed, etc.).

The product allows employees to concentrate on their business tasks without having to think about cybersecurity — after being installed on all devices, the solution doesn't

require any special attention. In addition, Kaspersky Small Office Security notifications have been updated and won't appear if the event is not crucial, allowing users to concentrate on their daily tasks — such as on office applications, on programs running in full-screen mode, or on performing video calls — without interruption. This causes less disturbance to the working day.

Ransomware continues to target small organizations, with 37% of VSBs having experienced two or three incidents of ransomware infection in the past 12 months. Ransomware directly results in data loss and/or compromise, so to protect businesses from this threat, the System Watcher component in the new version of Kaspersky Small Office Security is now available for Windows file servers as well as computers. In addition to other security layers, the solution detects threats and helps businesses to protect company data — preventing malicious attempts against the system, backing up critical data, and rolling back the system if required, to undo any damage.

In addition to the threat of ransomware, in 2017-2018, 2.7M users have been affected by crypto-miners, which use power from PCs, mobiles and servers to mine cryptocurrency. When targeted by this threat, businesses end up paying higher electricity bills, whilst their PCs and systems run at a lower performance rate. Kaspersky Small Office Security now provides businesses with protection from crypto-miners to help them deal with this threat.

By running a scheduled search for application updates, the solution now helps to decrease the risk of cybercriminals exploiting unpatched application vulnerabilities. It also supports safe web surfing, with private browsing, anti-phishing, anti-spam and anti-banner components. Meanwhile, the Safe Money feature protects financial transactions by opening payment sites in a protected browser.

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