

International

WHO's 'spectacular' success in saving smokers' lives

As many as 7.4 million premature deaths will have been prevented by 2050 thanks to tobacco control measures put in place in 41 countries between 2007 and 2010, according to new research published in the *Bulletin of the World Health Organization* (WHO).

The study is one of the first to look at the effect of tobacco control measures since the WHO Framework Convention on Tobacco Control (WHO FCTC) was established in 2005. It demonstrates the success of the WHO FCTC in reducing tobacco use and, thus, saving lives. 'It's a spectacular finding that by implementing these simple tobacco control policies, governments can save so many lives,' said lead author David Levy, Professor of Oncology at Georgetown Lombardi Comprehensive Cancer Centre in Washington, USA. In 2008, the WHO identified six evidence-based tobacco control measures that are the most effective in reducing tobacco use, and started to provide technical support to help countries fulfil their WHO FCTC obligations. Known as 'MPOWER', these measures correspond to one or more of the demand reduction provisions included in the WHO FCTC: monitoring tobacco use and prevention policies; protecting people from tobacco smoke; offering help to quit tobacco use; warning people about the dangers of tobacco; enforcing bans on tobacco advertising; promotion and sponsorship; and raising taxes on tobacco. The authors did a modelling exercise and projected the number of premature deaths that would be averted by 2050 through the implementation of one or more of these measures.

The study focused on the 41 countries (two of which are not parties to the WHO FCTC) that had implemented the demand reduction measures at 'the highest level of achievement', i.e. at a level proven to attain the greatest impact. These countries represented nearly one billion people or one-seventh of the world's population of 6.9 billion in 2008. The total number of smokers in those countries was nearly 290 million in 2007. Of the 41 countries, 33 had put in place one MPOWER measure and the remaining eight had implemented more than one. 'In addition to some 7.4 million lives saved, the tobacco control policies we examined can lead to other health benefits such as fewer adverse birth outcomes related to maternal smoking, including low birth weight, reduced healthcare costs and less loss of productivity owing to less smoking-related disease,' Levy said. Dr Douglas Bettcher, director of the department of non-communicable diseases at the WHO, said tobacco use was the single most preventable cause of death in the world, with six million smoking-attributable deaths per year – projected to rise to eight million a year by 2030.

Bone marrow transplants – a pointer to HIV cure?

Two HIV/AIDS patients have reportedly been taken off their HIV drugs after bone marrow transplants seemed to clear the virus from their bodies, intriguing doctors. One of the patients has spent nearly four months without taking medication, with no sign of the virus returning. The team at Brigham and Women's Hospital, USA, caution that it is far too soon to talk about a cure, as the virus could return at any point. It is difficult to get rid of an HIV

infection because it hides inside human DNA, forming untouchable 'reservoirs' in the body. Antiretroviral drugs keep the virus in check within the bloodstream – but when the drugs are discontinued, the virus inevitably returns. The two men had lived with HIV for nearly 30 years. They both developed a cancer, lymphoma, which required a bone marrow transplant. Bone marrow is thought to be a major reservoir for HIV. After the transplant, there was no detectable HIV in the blood for two years in one patient and for four in the other. Even if this was a cure, it wouldn't be a very good one because of the expense and it leading to 'graft v. host' disease, which has a 15 - 20% mortality rate within the first few years of the transplant. This occurs when new immune cells produced by the graft treat the rest of the body as foreign and attack it. The two patients in this study have replaced their regimen of antiretrovirals with drugs to suppress the immune system. The procedure was carried out in these patients only because they had cancer that needed to be treated. The real value of this research for the majority of people with HIV will come from a deeper understanding of the virus and HIV reservoirs. One of the patients had been off his medication for 15 weeks, and the other for seven weeks, at which points the viral load was undetectable. Dr Timothy Henrich said: 'We have not demonstrated cure, we're going to need longer follow-up. What we can say is if the virus does stay away for a year or even two years after we stopped the treatment, the chances of the virus rebounding are going to be extremely low.'

It is thought that the transplanted bone marrow was initially protected from infection by the course of antiretrovirals. Meanwhile, the transplant also attacked the remaining bone marrow, which was harbouring the virus. However, Dr Henrich cautioned that the virus could still be hiding inside brain tissue or the gastrointestinal tract. Timothy Brown, also known as the 'Berlin patient', is thought to be the first person cured of AIDS. He had a bone marrow transplant from a rare donor who was resistant to HIV. The two American patients both received bone marrow from normal donors. There was also a report of an HIV cure in a baby born in Mississippi, USA. She was treated with antiretroviral drugs at birth, so it is thought that the virus was cleared from the body before reservoirs were established. The head of the Foundation for AIDS Research, Kevin Frost, said: 'These findings clearly provide important new information that might well alter the current thinking about HIV and gene therapy. While stem-cell transplantation is not a viable option for people with HIV on a broad scale because of its costs and complexity, these new cases could lead us to new approaches to treating, and ultimately even eradicating, HIV.'

Africa

AU defends use of DDT for malaria control

Health ministers who met in Abuja are defending the use of dichlorodiphenyltrichloro-ethane (DDT) as an insecticide to control mosquitoes on the African continent. The draft declaration of a special summit of the African Union (AU) on HIV/AIDS, tuberculosis and malaria in Abuja compels African countries to 'strengthen the use of effective insecticides for control and elimination of malaria, including DDT where it is

suitable'. Suitability of DDT comes into question because the chemical, used as an agricultural pesticide, is a persistent environmental pollutant. Nigeria has proposed to use the chemical as an insecticide of choice in its larvicide programme. Nigeria's health minister, Onyebuchi Chukwu, admitted the inclusion of DDT in the draft declaration 'appears to have raised controversies'. However, he added that the WHO had cleared DDT for use in countries where mosquitoes are sensitive to insecticide. 'DDT is used in a number of countries. For the health sector, it is used only indoors, not in agricultural sector. That's why it was added,' he said. Delegates want the AU to categorically state its stand on the chemical, and South Africa has backed its use. South Africa said Africa's decision to use DDT in malaria control was dragged into political intrigue, while millions remain susceptible to the disease. It noted that countries that have managed to control malaria in the past did use DDT.

South Africa

Rotavirus spreads in Durban

A preliminary investigation into the cause of the severe diarrhoea that claimed the lives of two children revealed that the rotavirus has spread through the city, Durban health officials said in mid-July.

'During the investigation, the team confirmed that the eThekweni region has an outbreak of diarrhoea. More than half of the samples collected tested positive for rotavirus,' municipal spokesman Thabo Mofokeng said. According to the WHO, rotavirus is the leading cause of severe diarrhoeal disease and dehydration in infants and young children worldwide. Most symptomatic episodes occur in children aged between 3 months and 2 years. The virus spreads rapidly, through person-to-person contact, airborne droplets, and possibly contact with contaminated toys. Symptoms usually appear 2 - 3 days after infection, and include projectile vomiting and diarrhoea, often with fever and abdominal pain. The deputy head

of communicable disease services in the eThekweni municipality, Dr Ayo Olowolagba, said that at least 200 samples were taken from Mayville, Amaoti, KwaMashu and Ntuzuma. Olowolagba said probes were continuing to make certain that the outbreak was a result of the rotavirus. Health officials reported to the city's community and emergency committee that at least 98 patients were being treated for acute diarrhoea at King Edward VIII Hospital, 2 of whom have died, and 39 at Mahatma Gandhi Hospital, in Phoenix. All 137 cases, which were said to be severe, were reported on the same day. Olowolagba said more cases have since been reported.

'It might not be a case of it spreading; it could be that our awareness campaign is working. More mothers are bringing their children to hospital because they have been alerted to the outbreak instead of staying at home and trying to treat it on their own,' he said, adding that the rotavirus was highly contagious. More than 500 000 children under 5 are killed by the virus globally each year. There is no drug to treat rotavirus infection, but oral rehydration and a preventive vaccination are recommended. In most hospitals and clinics, oral rehydration is available.

Parents are shown how to mix the salt and sugar solution that helps to counteract diarrhoea.

SA-Cuba medical programme criticised

Medical experts have criticised the South African-Cuban doctor programme, saying the South African doctors were not adequately equipped when they came home. In early July, 62 medical students returned from Cuba to begin the last leg of their training to become qualified doctors. According to the Department of Health, there are 1 003 South African medical students training in Cuba. Health Minister Aaron Motsoaledi aims to increase the number of doctors trained in South Africa from 1 200 to 3 600 a year, with local medical schools already having upped their intake by 160 last year. However, the lack of facilities and places available has led

to students being sent to train in Cuba. 'The burden of disease in Cuba is very different,' explained Elma de Vries, a doctor based in Mitchell's Plain and former chairman of the Rural Doctors Association of Southern Africa (RUDASA). According to her, when the freshly trained doctors return to South Africa they do so without having been trained in how to deal with TB, HIV or the complications of diabetes. They also hadn't been trained to deal with women in labour, she said. The students spend their first year in Cuba learning Spanish. They spend another five years in medical school in Cuba before returning here to finish their training, which takes between 12 and 18 months. 'It's a long, tedious and expensive process, and it's very hard for them to meet expectations,' De Vries said. Professor Errol Holland, chairman of the South African Committee of Medical Deans, agreed with De Vries. 'They have a preventative healthcare system and we are not there yet,' he said. Students going to Cuba are trained in the needs of the Cuban healthcare system.'

Holland said his committee had raised 'issues' with Motsoaledi about the exchange programme. De Vries and Holland said there were simply not enough doctors in South Africa and the universities had struggled to increase their output. Holland said he understood that more doctors were required to implement Motsoaledi's National Health Insurance plan. 'We agree that there is a high degree of inequality [in healthcare] - about 1 000 doctors are required and this is what we are working towards,' he said. There were currently insufficient facilities and programmes to help to ensure that returning students were qualified to practise here. Joe Maila, spokesman for the Department of Health, said the programme was an agreement between the two governments. 'We needed to address the shortage of doctors and Cuba has more than 20 medical schools.'

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