

## Gauteng health dismisses Rotavirus outbreak rumours

The Gauteng Department of Health in South Africa has dispelled rumours of a Rotavirus outbreak in the province.

This follows a statement that was issued claiming that hospitals in Gauteng have had an increased incidence of babies with gastroenteritis despite having taken the Rotavirus vaccination that should have prevented this.

Rotavirus vaccine works only against the virus itself. It is not the only cause of childhood gastroenteritis. Other causes include changes from liquid to solid foods, food allergy, bacterial and viral infections, including HIV.

While it is true that Rotavirus is the leading cause of severe diarrhoea worldwide, studies that have been carried out by the National Institute for Communicable Diseases have shown a marked reduction in Rotavirus-related gastroenteritis in the country.

Since it is not the only cause of gastroenteritis in children, it is possible for a child to have gastroenteritis even though they have been immunised against Rotavirus, which is administered at six and 14 weeks.

## Human-scented traps help fight malaria

Dutch and Kenyan scientists have designed a unique mosquito trap that uses human odour to attract the malaria-carrying insects, helping cut the number of cases dramatically, researchers have said.

A three-year study in Kenya found the traps baited with synthetic smell helped to catch 70% of the local malaria-carrying mosquito population, and led to a 30% drop in cases at households using the devices.

'The odour-baited trap may also offer a solution to diseases like dengue fever and Zika virus,' Wageningen University in The Netherlands, which led the research.

Both dengue and Zika are caused by parasites carried by a different kind of mosquito to the malaria-bearing one, but are also attracted by human smell.

'Beating malaria without using insecticides is my ultimate dream,' said Willem Takken from Wageningen University.

# Mosquito factory in China targets Zika and malaria

Mosquito-borne diseases are responsible for more than one million deaths worldwide every year and Zika has become a concern for athletes at this year's Olympic Games.

Every week, scientists in southern China release three million bacteria-infected mosquitoes on a three kilometre (two-mile) long island in a bid to wipe out diseases such as dengue, yellow fever and Zika.

The scientists inject mosquito eggs with *wolbachia* bacteria in a laboratory, and then release infected male mosquitoes on the island on the outskirts of the city of Guangzhou.

The bacteria, which occurs naturally in about 28% of wild mosquitoes, causes infected males to sterilise the females they mate with.

'The aim is trying to suppress the mosquito density below the threshold which can cause disease transmission,'

said Zhiyong Xi, Director of the Sun Yat-sen University Centre of Vector Control for Tropical Diseases and pioneered the idea.

'There are hot spots,' Xi said. 'This technology can be used at the beginning to target the hot spots ... it will dramatically reduce disease transmission.'

US health officials have concluded that Zika infections in pregnant women can cause microcephaly, a birth defect marked by small head size that can lead to severe developmental problems in babies.

The World Health Organization has said there is strong scientific consensus that Zika can also cause Guillain-Barre, a rare neurological syndrome that causes temporary paralysis in adults.

Xi set up his 3500 square metre (38000 sq ft) 'mosquito factory' in 2012.

Xi said the mosquito population on the island has been reduced by more than 90%.



# A monthly HIV ring is helping women guard against infection

A monthly vaginal ring developed by the non-profit International Partnership for Microbicides (IPM) has been shown to protect significantly against HIV infection when used consistently, according to Phase III study results described in a recent article in *The New England Journal of Medicine*.

Similar in design to NuvaRing and other hormone-dispensing products, the small, flexible ring can be worn inside the vagina to release steady doses of the HIV-fighting microbicide dapivirine and prevent infection with success rates of up to 70%.

Conducted between 2012 and 2015 in 15 research sites across Malawi, South Africa, Uganda, and Zimbabwe, the project studied the effectiveness of dapivirine-dispensing rings for preventing new HIV infection among healthy, non-pregnant women aged 18 to 45. It found that the risk of HIV infection for participants using dapivirine rings rather than placebo treatments was cut by at least 56%, while those who used

the product the most saw prevention rates of as high as 75%.

If approved for use, the ring may quickly prove to be a vital resource for women living in southern Africa, where AIDS is the leading killer of young women and 1000 more become infected with HIV each day.

'These women are living in situations and circumstances that no matter where they turn, they're faced with the risk of violence — and then very negative health outcomes,' said American University Sociologist Allison Groves. 'And so much of that is beyond their own control.'

Zeda Rosenberg, founder and CEO of IPM, explained, women do not have control over their lives sexually... rape, both within and outside a relationship is very common, and men either threaten violence if they are asked to use a condom or actually incur violence. It is pervasive that the power dynamics here favour men, and the ring can help a woman control her body and her health without necessarily challenging the man.

## Governments to step-up emergency preparedness as threats continue to emerge

With more than 100 public health emergencies occurring each year in the African Region, Health Ministers have agreed to implement some key actions to ensure that people in Africa and beyond are better protected from health emergencies.

The actions are outlined in the Regional Strategy for Health Security and Emergencies 2016–2020 and was endorsed by the Ministers at the annual World Health Organization (WHO) Regional Committee, which took place in Addis Ababa at the end of August. They agreed among others that by 2018, at least 80% of the 47 countries will have tested and resourced all-hazards preparedness plans, conducted outbreak and disaster risk analysis, and mapping in a multisectoral approach, as well as put in place policies and guidelines to support International Health Regulations and Disaster Risk Management implementation.

‘The implementation of the regional strategy for health security and emer-

gencies will strengthen the capacity of countries in the Region to prepare for, prevent, detect, respond and quickly recover from emergencies in a predictable, dependable and accountable way’ said Dr. Matshidiso Moeti, WHO Regional Director for Africa.

It is expected that by 2020, at least 80% of Member States will have a fully functioning public health emergency operation centre and a functional national laboratory system.

The meeting also reviewed modalities of contributing to and managing the African Public Health Emergency Fund (APHEF). Dr. Moeti advocated for renewed commitment from Member States towards sustaining the Fund. Recently, APHEF resources have funded vaccination campaigns to contain the current outbreaks of yellow fever, and established emergency treatment centres to manage cholera.

WHO mapped out the impact of 15 tropical diseases, ranging from anthrax to Ebola to Zika, in a report released in May 2016.

## Reducing child deaths in Africa

A partnership at the University of Cape Town (UCT) is making its mark across the continent to improve health.

Several doctors from the African Paediatric Fellowship Programme (APFP), run by UCT, have come together from all over the continent to form the East Africa Centre for Vaccines and Immunisation (Ecavi).

The partnership is founded by Dr. Ombeva Malande from Kenya and aims to address prevention and control of vaccine-preventable diseases and cancers by focusing on advocacy, training, research, and the strengthening of health facilities across East Africa.

The APFP is a unique research and teaching programme focused on expanding paediatric medical skills across the continent to improve child healthcare. The programme offers all the required resources and a rich learning environment for successful fellowship training. Fellows spend their two years training at the Red Cross War Memorial Children’s Hospital in Cape Town.

Dr. Malande specialises in infectious diseases and arrived at the Red Cross Children’s Hospital in 2014. He is the director of Ecavi, which launched in August 2014, and runs three programmes: the vaccinology course for health professionals, cervical cancer prevention programme, and the health education programme.

Malande uses their Facebook page and website to share advice and information as far and wide as possible, as well as getting in touch with possible funders. They are also trying to work hand-in-hand with governments, the South African Vaccine Initiative (Savic), and Network for Education and Support in Immunisation (in Antwerp, Belgium), East African universities, and public health institutions to help with information on vaccines and immunisation.

‘There are more than 40 million children in East Africa, so this is going to be a step-by-step process, but if we can educate 60 to 70 health workers just with one course, then we are already making a huge difference,’ Malande said.

## India to open doors for Africa in health research

Medical students from African countries will soon be trained, offered fellowships and get hands-on experience of working within Indian hospitals, to help strengthen India-Africa relations.

As a part of the India-Africa Summit in 2015, the engagement of African countries in areas of health research is being planned.

The programme is a joint effort of Indian Council of Medical Research (ICMR), Ministry of External Affairs (MEA), Ministry of Commerce, Ministry of Health, and department of Science and Technology will be inaugurated in September.

‘The idea is to have a capacity building for all the medical students, experts and researchers. The programme is a collaboration of the countries in the field of health research. This is the first time that four ministries have come together to work for a single programme,’ Dr. Soumya Swaminathan, Director General, ICMR.

Dr. Swaminathan added that the entire programme will be planned soon and research fellowships, PhD students, and other courses for medical students will be offered.

According to the experts, India’s expertise in healthcare and affordable medicines can offer new hope in the fight against many diseases; and give a newborn a better chance to survive.



## By 2030, viral hepatitis to be eliminated from the African Region

By 2030, the African Region wants to eliminate viral hepatitis as a major public health threat. With the launch of the document 'Prevention, Care and Treatment of viral hepatitis in the African Region: Framework for action 2016–2020', the World Health Organization (WHO) provides guidance to Member States in the Region on how to implement the first-ever Global Health Sector Strategy on viral hepatitis, which was adopted last May at the World Health Assembly.

'Over the next five years, the African Region should have one third less chronic viral hepatitis B and C infections,' says Dr. Matshidiso Moeti, WHO Regional Director for Africa. 'In addition, we also want to bring down the number of viral hepatitis B and C related deaths by 10%.'

Viral hepatitis is an infection of the liver caused by five distinct hepatitis viruses (A, B, C, D, and E) and is a highly widespread public health problem in Africa. All five viruses can cause severe disease, but the highest numbers of deaths result from liver cancer and cirrhosis.

Around the world 400 million people are infected with hepatitis B and C, more than 10 times the number of people living with HIV. Viral hepatitis was the seventh highest cause of mortality in the world in 2013, with an estimated 1.4 million deaths per year — up from less than a million in 1990.

In the African Region, hepatitis B is highly endemic and affects an estimated 100 million people, while an estimated 19 million adults are chronically infected with hepatitis C. Viral hepatitis is also becoming more a growing cause of mortality among people living with HIV. About 2.3 million people living with HIV are co-infected with the hepatitis C virus, and another 2.6 million are co-infected with the hepatitis B virus.

With the newly adopted framework at the WHO Regional Committee for Africa, the Region aims at stopping viral hepatitis transmission, strengthening public awareness and prevention, as well as ensuring that everyone living with viral hepatitis has access to safe, affordable and effective care and treatment services.

## Belated progressive appointments in Nigeria

After months of light touch management of the health sector, President Muhammadu Buhari surprised many by suddenly announcing an eyebrow raising list of appointment of heads of five of the most strategic health institutions in the country.

To head the Centre for Disease Control is Dr. Chikwe Ihekweazu, who until his appointment, was the managing partner at EpiAfric, a public health consultancy firm that focuses on Africa and also an editor of the Nigerian edition of this journal.

Dr. Sani Aliyu, a consultant in Microbiology and Infectious Diseases at Cambridge University, UK takes over the difficult task of leading the National Agency for the Control of Aids.

The president also approved Prof. Babatunde Salako's appointment as the head of the Nigerian Institute for Medical Research. He was the Provost, College of Medicine at the University of Ibadan before his new appointment.

Prof. Echezona Ezeanolue takes over at the National Primary Health Care Development Agency. He was a profes-

sor of Paediatrics and Public Health at the University of Nevada, Las Vegas, USA.

And the National Health Insurance Scheme will be headed by Prof Usman Yusuf, who until his appointment, was a professor of Paediatrics at St. Jude Research Hospital in Memphis, Tennessee, USA.

Amidst the positive comments on the appointments Africa Health asked Dr Ben Anyene, Chair of the Health Reform Foundation of Nigeria (HERFON) for his observations: 'The appointments are well received, however it is a road we have traveled often with not too good results. Thus we want these new heads to give Nigerians these surprises: i) Have baselines from which they can be measured; ii) Develop a smart sector strategic plan, annual workplans and M&E plans with verifiable indicators to guide their stewardship, and iii) Achieve health outcomes that contribute to marked reduction in morbidity and mortality, especially amongst newborns, children and mothers. They are achievable and on these we shall hold them accountable.'

## Mobile tech enables family planning data access

An innovative mobile technology is helping countries in sub-Saharan Africa access vital data on family planning and reproductive health every six months.

Performance Monitoring and Accountability 2020 (PMA2020), which uses the mobile technology, provides information useful for reporting, planning, operational decisions and advocacy at the community, country and global levels.

The project is currently implemented in eight countries in sub-Saharan Africa — Burkina Faso, Democratic Republic of Congo, Ethiopia, Ghana, Kenya, Nigeria, Niger, and Uganda — and two countries in Asia (India and Indonesia) through in-country partner universities

and research organisations, with the aim of building local capacity.

Data on family planning is usually available every five years through countries' demographic and health surveys.

'PMA2020 is making this data available every six months, which could change the game by enabling policy-makers to make real-time decisions,' said Selamawit Desta, programme officer of PMA2020 at Bill & Melinda Gates Institute for Population and Reproductive Health, located at the US-based Johns Hopkins Bloomberg School of Public Health.

'We are hopeful that we can attract investments that will allow the data collection platforms to continue to the year 2020 and beyond,' Desta added.

PMA2020 is funded by the Bill & Melinda Gates Foundation.

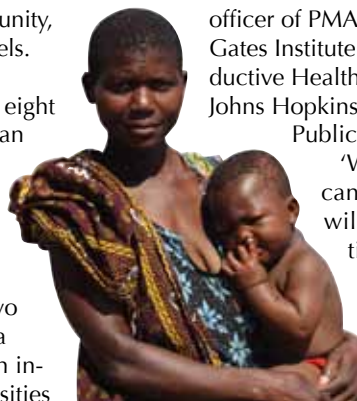


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## Hypertension on the rise in low- and middle-income countries

The burden of hypertension has shifted over the last 16 years, resulting in a greater prevalence of the disease in low- and middle-income countries than in high-income countries for the first time in history, a new analysis shows.

Senior researcher Jiang He, MD, PhD from Tulane University School of Public Health and Tropical Medicine, New Orleans, said that changes in lifestyle factors, including increased salt, fat, and calorie intake, along with decreased physical activity, are a main contributor to the changes seen in middle- and low-income countries.

Led by He's colleague Katherine T. Mills, PhD, also from Tulane University, the study found that 31.1% of people residing in low- to middle-income countries, amounting to approximately 1.4 billion people, had hypertension as of 2010. In comparison, the prevalence was 28.5% in high-income nations.

The numbers represent a 7% increase for low- and middle-income countries from 2000 to 2010, compared with a 2.6% decrease over the same time for

the high-income countries. Low- and middle-income areas that appear to have experienced the greatest increases in absolute burden of hypertension were in East Asia and Pacific, South Asia, and sub-Saharan Africa.

Awareness, treatment, and control of hypertension all increased in high-income countries during the study period, while low- and middle-income countries saw only slight improvements in awareness and treatment accompanied by a decrease in adequate hypertension control.

According to He, low- and middle-income countries face more of a challenge in getting public health messages out about hypertension awareness than high-income countries.

'We believe that on a global level everyone has to work together to deal with this most important public health challenge,' He said. In addition to lifestyle factors, the researchers say, overburdened healthcare systems also are likely to blame for the disparities seen globally.

## New compound offers hope for millions around the world

Scientists have identified a compound that can kill the parasites responsible for three diseases that plague the lives of millions of people in Latin America, Asia and Africa, yet receive little funding or research into treatments.

Research, published in *Nature* (<http://www.nature.com/nature/journal/vaap/ncurrent/full/nature19339.html>), suggests that a single class of drugs could treat chagas disease, leishmaniasis and sleeping sickness, which infect many millions of people and cause around 50 000 deaths every year.

The three diseases have different symptoms, but are all caused by parasites called 'kinetoplastids' - a type of single-celled organism. The parasites share similar biology and genetics, which led scientists to think it might be possible to find a single chemical that could destroy all three.

Wellcome-funded researchers at the Genomics Institute of the Novartis Research

Foundation (GNF) have identified a chemical that can cure all of these diseases in mice. Importantly, it does not harm human cells in laboratory tests, providing a strong starting point for drug development.

The GNF team tested over three million different chemicals and identified a compound, GNF6702, which was effective against the parasites, but did not damage human cells.

Senior study author Frantisek Supek from GNF said: 'We found that these parasites harbour a common weakness. We hope to exploit this weakness to discover and develop a single class of drugs for all three diseases.'

The project was led by Supek at GNF, in collaboration with researchers at the Novartis Institute for Tropical Diseases (NITD), University of York, University of Washington, and the University of Glasgow. It received funding from the Wellcome Trust and US National Institutes of Health.

## Despite hitches, breastfeeding still significant to baby's health



Mothers all over the world have been reminded about the importance of breastfeeding as the best way to promote the health for their babies.

The World Breastfeeding Week (WBW), held every year from 1 to 7 August in more than 120 countries, was an opportunity to promote exclusive breastfeeding during the first six months of the baby's life. The week was first celebrated in 1992, and mothers around the world have been educated on the benefits of breastfeeding.

Male parents and employers are also asked to support and encourage the feeding of infants in the first six months after birth.

The World Health Organization (WHO) and health experts, particularly paediatricians, agree that the practice yields tremendous health benefits, providing critical nutrients, protection from deadly diseases such as pneumonia, fostering growth and development.

This year, the WHO is also encouraging people to 'Support mothers to breastfeed anytime, anywhere, and society has a role to play in making our communities more breastfeeding-friendly'.

The World Breastfeeding Week 2016 theme was about how breastfeeding is a key element in getting us to think about how to value our wellbeing from the start of life, how to respect each other and care for the world we share.

WHO explained that breastfeeding is a key to sustainable development, it is particularly 'through the links between breastfeeding and nutrition and food security; health, development and survival'.

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