

## Synchronised campaign to rid Africa of polio

Africa is to seize an unprecedented chance to drive out polio when 15 countries across the continent launch a synchronised mass immunisation campaign to reach 72 million children, capitalising on gains made this year.

A total of some 290 000 vaccinators have been mobilised to deliver two drops of oral polio vaccine (OPV) to every child under 5 in areas considered at 'highest risk' of polio transmission.

Recent weeks have shown the very real risks of not completing eradication, with a case in Liberia confirming residual transmission, a new importation of type 3 wild poliovirus into Mali (the first since 2001), and a case in Uganda, which had been polio-free for more than a year. In all countries, rapid assessments are being conducted to formulate an emergency response

plan in which two additional mop-up rounds will be held. All countries in the West Africa sub-region will again conduct two full campaigns in February and March, 2011, but these must be complemented by enhanced routine immunisation and strong surveillance.

With the outbreak in Angola having spilled into neighbouring provinces of the DRC, these two countries now represent the greatest threat to polio in Africa, having recorded 48 of Africa's 58 cases in the past 6 months. However, the virus in DRC remains geographically restricted and in Angola, steps to close vaccination coverage gaps in the most recent campaign saw the percentage of missed children in the key reservoir of Luanda fall from nearly 30% to 13%, while nationally, the percentage of missed children fell from 15% to 8%.

### Major reassessment of Africa's medical schools

An initial study on the fitness for purpose of Africa's medical schools (funded by the Gates Foundation) produced such stark evidence of need for change if Africa's health priorities are to be met, that significant follow-on funding has swiftly been allocated through the National Institutes of Health (NIH) of the USA. The work is being coordinated by Professor Fitzhugh Mullan of the University of Washington and Prof Francis Omaswa of the African Centre for Global Health and Social Transformation (ACHEST).

The initial report of the sub-Saharan African Medical School Study (SAMSS) was formally launched in Kampala on November 11<sup>th</sup> at a ceremony presided over by the Ugandan Minister of Health, Hon. Dr Stephen Mallinga.

'In our campaigns for development the lack of medical doctors limits our chances for success. Our progress toward the millennium development goals that target reductions in maternal mortality, infant mortality, and HIV/AIDS, malaria, and other diseases is slowed by the lack of doctors,' the minister said.

Prof. Miriam Were, from Kenya and a board member of the Global Health Workforce Alliance, called for better

motivation and retention of medical teachers to keep them in the medical schools and ensure that the quality of doctors is high. 'A half-baked doctor is worse than no doctor at all,' said Professor Were. She urged that children of teachers in medical schools should be given scholarships to ease the burden of tuition fees from their parents.

The report produced ten key recommendations including: the launch of campaigns to develop medical school faculty capacity including measures for recruitment, training, and retention; a call to ramp up investment in medical education infrastructure; institute structures to encourage better inter-ministerial collaboration for medical education; fund research and training in medical schools; promote community oriented education based on the principles of primary healthcare; establish national and regional post-graduate medical education programmes; establish national or regional bodies responsible for accreditation and quality assurance of medical education; increase donor investment; recognise and review the growing role of private institutions in medical education; and finally, revitalise the Association of Medical Schools in Africa.

Much more on this important initiative in the next issue of *Africa Health*.

### Handheld device diagnoses malaria over 20 times faster than other tests



A rapid handheld diagnostic device for malaria, designed to address the high-levels of malaria-related infant mortality in sub-Saharan Africa, has been launched. The battery-operated device, which enters field testing next year, applies magneto-optic techniques to reach a diagnosis through a fingerprick format, 20 times faster than all other tests.

Developed in the UK's University of Exeter, the device is targeted for use by minimally skilled health workers in the remotest environments. It is designed to fully satisfy the requirements of the Global Health Diagnostics Forum (GHDF), and is just as sensitive as other tests while requiring no reagents, the temperature sensitivity of which is known to mar the performance of the only other portable test.

The innovative device makes its diagnosis by detecting changes brought by infecting malarial parasites on the oxygen carrying haemoglobin molecules contained in red blood cells.

### Rwanda donates US\$1 million to The Global Fund

The Government of Rwanda has donated US\$1 million to The Global Fund to Fight AIDS, Tuberculosis and Malaria. The pledge is part of the Third Voluntary Replenishment of the Global Fund, which has received US\$11.7 billion in financial commitments for the years 2011–2013.

Rwanda is one of the countries in Africa that is set to reach the Millennium Development Goals targets, if its interventions keep the current pace, particularly in the area of maternal and children's health. The country reduced under-5 mortality by 50% and maternal mortality by 64%, between 2000 and 2008.

## Vaccine hope in fight against pneumonia and meningitis

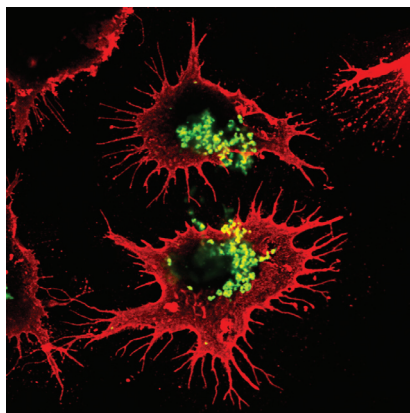
A new breakthrough in the fight against pneumonia, meningitis, and septicaemia has been announced today by UK scientists in Leicester and Dublin.

The discovery will lead to a dramatic shift in our understanding of how the body's immune system responds to infection caused by *Streptococcus pneumoniae* and pave the way for more effective vaccines.

The collaborative research has been published in the international peer-reviewed journal *PLoS Pathogens*. The research was carried out by the teams from the Universities of Leicester and Dublin with other collaborators from Trinity College Dublin, the US, and Switzerland over 4 years, and supported by Science Foundation Ireland, Enterprise Ireland, the Medical Research Council (MRC) and the Meningitis Research Foundation.

The two teams say they have shown for the first time that the bacterial toxin pneumolysin triggers an immune response by activating a recently discovered group of proteins, called the NLRP3 inflammasome. Once activated, the inflammasome provides protection against infection caused by this pathogen.

The Leicester and Dublin research groups demonstrated that this mechanism operates independently of other previously described immune response



A dendritic cell infected with *Streptococcus pneumoniae*

proteins – contrary to a dogma in the field. Importantly, this paper is the first to demonstrate that the NLRP3 inflammasome is essential to the immune response against infection by the pathogen and that the bacterial toxin pneumolysin is the key driver of this process.

The researchers state that this new knowledge of how the toxin interacts with the immune system will mean that new vaccines can be developed and targeted more effectively. Describing the results as exciting, the researchers say it will potentially have a significant impact on vaccine development against pneumococcal disease.

### New African-led health R&D network launched

The UN Economic Commission for Africa (UNECA) and WHO have joined forces to establish an African-owned and governed initiative to promote innovation for the development of pharmaceuticals and other products to meet the health needs of the continent.

The African Network for Drugs and Diagnostics Innovation (ANDI) is organised to build research capacity on the continent and link biomedical innovation to development and public health. This announcement came at the opening of the 3rd ANDI stakeholder meeting in Nairobi Kenya, which brought together over 500 experts, policy makers, donors, and Africans in the diaspora.

'This marks an important milestone in our ongoing efforts to support African-led science to generate innovation for health and produce health products that address the important health problems in the Region,' said Dr Luis Sambo, WHO's Regional Director of the African Region.

ANDI will be hosted by UNECA, based in Addis Ababa, Ethiopia. Mr Abdoulie Janneh, the United Nations Under-Secretary-General and UNECA Executive Secretary, said, 'ANDI presents a unique opportunity and represents a powerful mechanism for mobilising Africa health research capability, unleashing African health innovation potential, and expanding global partnerships and regional collaborations to accelerate the delivery of quality healthcare in Africa.'

### Kenyan government to waive duty on imported medical equipment

The Kenyan government is to waive duty on all medical equipment imported into the country by hospitals.

President Kibaki has directed health institutions wishing to import medical equipment to notify the Health Ministry in advance so that the waiver could be facilitated. 'But you must ensure that that equipment goes to the hospitals. All you have to do is to write to the ministry to tell them that you are importing the equipment,' said the President.

### Physicians should engage public in battle to improve healthcare

A call to physicians to engage the public in the battle to improve health has come from the outgoing President of the World Medical Association, Dr Dana Hanson.

In his valedictory speech as President at the WMA's annual Assembly in Vancouver, Canada, Dr Hanson said that financial crises often resulted in slashed health budgets, 'but why is there no outcry by the public that the disease burden remains the same or greater?'

### 'Paradigm shift' needed in healthcare

Experts say a 'paradigm shift' is needed in healthcare in Africa to include greater focus on the prevention and treatment of non-communicable diseases (NCDs) such as diabetes and hypertension and not just infectious diseases like HIV/AIDS, health experts told the 2010 US-Africa Private Sector Health Conference in October.

'NCDs account for 60% or 35 million of global deaths ... making NCDs a major cause of poverty and an urgent development issue,' said Silva Bahendeka, chair of the International Diabetes Association's Africa region. He predicted that 'Africa will have the highest percentage of increase in the number of people with diabetes over the next 20 years.' Eighty percent of the people now living in Africa have not yet been screened for diabetes, he told the audience.

## Research shows head carrying not easy for African women



Contrary to a common scientific assumption, African women find carrying water or bundles of firewood on their head no more efficient and a lot more painful than other methods, research at the Scottish University of Abertay Dundee has found. Studies found that women do not find it easier carrying on their head, and this doesn't get easier with practise. It is also very painful, and the women wouldn't use head-carrying if they had a choice.

Previous research published in *Nature* had claimed that head-carrying gave a significant advantage over other

transport methods, such as carrying heavy loads by hand or on a person's back. However, the new finding disproves this commonly accepted claim, which has been cited as evidence in over 100 scientific journals. Lead researcher Ray Lloyd said, 'I was fascinated by the ease with which the women seemed to carry very heavy loads such as firewood and water on their head. When I examined the literature there was some evidence that head-loading might be an extremely efficient way of carrying loads. It was claimed that the women could carry loads of up to 20% of their own bodyweight with no extra energy requirement. The original studies were based on very limited sample sizes so I wanted to confirm this with a bigger group. However, my results suggest quite the opposite: that head-loading is no more efficient than other methods, and is very painful for the women. The truth is that head-carrying is a necessity, borne of the need to carry essential items such as water or firewood over difficult terrain, not a preference.'

Mr Lloyd plans to use X-rays to see if this technique causes long-term damage to the neck, as well as assessing the energy requirements of carrying water and firewood in real-life, rural settings.

### A winning reader: Dr Filmon of Asmara

In the September issue of *Africa Health* we announced the winners of the prize-draw from returned entries for the readership questionnaire carried in the January issue. We have now had a chance to contact the winners and find out a little about them.

Dr Haile Filmon (pictured below) currently works as a general physician for UN staff and their dependents in



Asmara, Eritrea. Aged 47, he is married with four children and graduated from Gondar College of Medical Sciences, Ethiopia in 1989. He wins the surgical set donated by Durbin PLC.

We haven't yet received a picture from second prize winner, Andrew Chulu but hopefully he has got his hemo control photometer from EKF. Similarly, third prize stethoscopes supplied by Healthcare Equipment and Supplies, UK have been despatched in all directions. Our thanks to those of you who completed the questionnaire, it provides us with valuable guidance in the development of the journal. Our gratitude also to our prize sponsors.



### Revitalising regional PHC in Nursing and Midwifery

The East, Central and Southern Africa College of Nursing (ECSACON) held its 9th Scientific Conference in August in Lusaka, Zambia. The theme of the meeting was 'Revitalizing primary healthcare in nursing and midwifery to enhance the achievement of millennium development goals'. Nurse leaders, clinicians, researchers and educators attended from 14 countries.

### UN call for treatment of obstetric fistula

Secretary-General Ban Ki-moon is calling for at least US\$750 million to treat some 3.5 million cases of obstetric fistula by 2015 in an effort to cure the debilitating injury caused by obstruction in giving birth.

'Obstetric fistula is one of the most devastating consequences of neglect during childbirth and a stark example of health inequity in the world,' he says in a report to the General Assembly, in which he calls for intensified investment in cost-effective interventions, including surgery, to address the problem that afflicts women with the leakage of bodily wastes.

Although the condition has been eliminated in the developed world, obstetric fistula continues to afflict the most impoverished women and girls, most of whom live in rural and remote areas of the developing world.

Reconstructive surgery can repair fistula injury and most women can be treated and, with appropriate psychosocial care, reintegrated into their communities, but few healthcare facilities are able to provide high-quality fistula treatment owing to the limited number of healthcare professionals with the appropriate skills.

Apart from surgery, Mr Ban stresses prevention, noting that the condition is almost entirely preventable when there is universal and equitable access to quality maternal and reproductive health services. The same interventions that prevent maternal mortality can also prevent maternal morbidity.

UN Population Fund Executive Director Thoraya Ahmed Obaid said, 'Every year millions of women suffer from pregnancy and birth-related complications, as well as injuries. Through working together we can ensure that fistula is something of the past.'

## UN-backed initiative to eliminate tuberculosis

A new initiative designed to combat tuberculosis (TB), which claims the lives of nearly 2 million people across the world every year, could accelerate progress towards eliminating the disease if governments and donors commit enough funds to the plan, says the World Health Organization.

The 'Global Plan to Stop TB 2011-2015: Transforming the Fight Towards Elimination of Tuberculosis' identifies all the research gaps that need to be filled to make rapid TB tests available, bring faster treatment regimens and a fully effective vaccine to market, according to WHO. Although TB is curable, the treatment requires taking a combination of drugs for at least 6 months. Laboratories in most countries are still using a century-old diagnostic method that involves searching for TB bacteria derived from a person's sputum under a microscope. There is still no vaccine to prevent pulmonary TB, the most common form of the disease.

The new scheme unveiled by the WHO-hosted Stop TB Partnership shows public health programmes how to promote universal access to TB care, including how to modernise diagnostic laboratories and adopt revolutionary tests that have recently become available. It seeks to provide diagnosis and treatment approaches recommended by WHO for 32 million people over the next 5 years.

'There is an urgent need to scale up action against TB – 10 million people,

including 4 million women and children, will lose their lives unnecessarily between now and 2015 if we fail,' said Margaret Chan, the agency's Director-General.

The Global Plan provides a clear roadmap for addressing drug-resistant TB, calling for 7 million people to be tested for multi-drug-resistant TB (MDR-TB) and 1 million confirmed cases treated according to international standards over the next 5 years.

Every year, half a million people die from HIV/AIDS-related TB. If the plan's targets are met, by the end of 2015, all TB patients will be tested for HIV and, if the test is positive, they will receive anti-retroviral drugs and other appropriate HIV/AIDS care. All patients being treated for HIV will be screened for TB and receive the preventive therapy or treatment necessary.

The new initiative calls for \$37 billion for TB care between 2011 and 2015. A funding gap of about \$14 billion – nearly \$3 billion per year – will still remain and needs to be filled by international donors.

It includes a separate calculation of the funding required to meet targets for research and development – a total of \$10 billion, or \$2 billion per year. High-income countries and those with growing economies will need to increase their investment in research and development to fill an estimated gap of about \$7 billion, or \$1.4 billion per year.

### Progress towards MDG 6: reducing AIDS infections

UNAIDS recently released data on progress towards MDG 6: to halt and begin to reverse the spread of HIV by 2015, and called for leveraging the AIDS response to support all MDGs.

The data show that countries with the largest epidemics in Africa – Côte d'Ivoire, Ethiopia, Nigeria, South Africa, Zambia, and Zimbabwe – are leading the drop in new HIV infections. Between 2001 and 2009, 22 countries in sub-Saharan Africa have seen a decline of more than 25% in new HIV infections, the number of which is steadily falling or stabilising in most parts of the world.

'We are seeing real progress towards MDG 6,' said UNAIDS Executive Director Michel Sidibé. 'For the first time change is happening at the heart of the epidemic. In places where HIV was stealing away dreams, we now have hope.'

There are now 5.2 million people on HIV treatment, which is a 12-fold increase in 6 years. AIDS deaths have dropped significantly since the widespread availability of treatment – there were 200 000 fewer deaths in 2008 than in 2004. Young people are leading the prevention revolution by choosing to have sex later, having fewer multiple partners, and using condoms, resulting in significantly fewer new HIV infections in many countries highly affected by AIDS. Among adults, male condom use has doubled in the past 5 years. Communities are embracing male circumcision, which research shows has the potential to reduce HIV infection among men by nearly 60%.