

Global Plan to eliminate new HIV infections among children by 2015

World leaders, gathered in New York recently for the 2011 United Nations High Level Meeting on AIDS, launched a Global Plan that will make significant strides towards the elimination of new HIV infections among children and keeping their mothers alive.

The Global Plan was developed through a consultative process by a high level Global Task Team convened by UNAIDS and co-chaired by UNAIDS Executive Director Michel Sidibé and United States Global AIDS Coordinator Ambassador Eric Goosby. It brought together 30 countries and 50 civil society, private sector, networks of people living with HIV, and international organisations to chart a roadmap towards achieving this goal by 2015.

This plan covers all low- and middle-income countries, but focuses on 22 countries with the highest estimate of HIV-positive pregnant women. Exceptional global and national efforts are needed in these countries that are home to nearly 90% of pregnant women living with HIV in need of services. Intensified efforts are also needed to support countries with low HIV prevalence and concentrated epidemics to reach out to all women and

children at risk of HIV. The Global Plan supports and reinforces the development of costed, country-driven national plans.

'We believe that by 2015 children everywhere can be born free of HIV and that their mothers can remain healthy,' said Michel Sidibé. Executive Director of UNAIDS. 'This new global plan is realistic, it is achievable and it is driven by the most affected countries.'

'Nearly every minute, a child is born with HIV. Working together, we can reverse this tide as we have done in the United States and they are very close to doing in Botswana,' said Ambassador Goosby.

In answering the Global Plan's call to action, the United States President's Emergency Plan for AIDS Relief (PEPFAR) announced an additional US\$75 million to preventing mother-to-child transmission of HIV (PMTCT) efforts. This funding will be on top of the approximately US\$300 million that PEPFAR already provides annually for PMTCT.

The Bill & Melinda Gates Foundation pledged US\$40 million, Chevron committed to US\$20 million, and Johnson & Johnson pledged US\$15 million.

Gonorrhoea strain found to be 'resistant to antibiotics'

A new strain of the sexually transmitted disease gonorrhoea has become resistant to antibiotics, international research shows. Analysis of the bacterium that causes gonorrhoea found a new variant which is very effective at mutating.

Scientists from the Swedish Reference Laboratory warn that the infection could now become a global threat to public health. New drugs to delay the spread of the infection are needed, experts say.

The first case of antibiotic-resistant gonorrhoea was found in Japan. By analysing this new strain of neisseria gonorrhoea, called H041, researchers identified the genetic mutations responsible for the new strain's extreme resistance to all cephalosporin-class antibiotics.

Cephalosporins are used to treat a

wide variety of bacterial infections. They are also closely related to the penicillins.

A team of researchers will present its findings at a conference run by the International Society for Sexually Transmitted Disease Research in Canada.

Dr Magnus Unemo, from the Swedish Research Laboratory for Pathogenic Neisseria, said it was an alarming and predictable discovery.

'Since antibiotics became the standard treatment for gonorrhoea in the 1940s, this bacterium has shown a remarkable capacity to develop resistance mechanisms to all drugs introduced to control it. While it is still too early to assess if this new strain has become widespread, the history of newly emergent resistance in the bacterium suggests that it may spread rapidly unless new drugs and effective treatment programmes are developed.'



WHO links cell phones with cancer

Cell phone use may cause cancer, the World Health Organization announced recently

There is not enough long-term data to link cancer and cell phone use directly, reported a group of 31 scientists from 14 countries. But there is enough information to issue an alert.

With this announcement, WHO now groups cell phones in the same hazard category as chloroform, lead, and engine exhaust.

West Africa: meningitis cases dramatically down

The roll-out of a revolutionary meningitis vaccination in Burkina Faso, Mali, and Niger has dramatically cut transmission rates, according to the World Health Organization (WHO), and if each country can find sufficient funds to co-finance the campaign, it will be extended to all 25 countries in the Africa meningitis belt by 2016, says the Global Alliance for Vaccines and Immunization (GAVI).

In the 2010–2011 meningitis season, Burkina Faso has confirmed just four cases of meningitis A; Niger has reported four cases; and Mali none, according to WHO.

While in Burkina Faso everyone in the 1–29 age group was vaccinated – representing 70% of the population – Mali and Niger are doing phased roll-outs over a longer period.

Malaria: a long, slow, but steady road to elimination

A new report on malaria research says funding has risen dramatically and should lead to new drugs, vaccines, and other weapons for the fight against the disease within a few years. The report comes from six different major organisations, including the Malaria Vaccine Initiative and Medicines for Malaria Venture. See: <http://www.malariavaccine.org/files/RD-report-June2011.pdf>.

Many countries hit by both infectious and chronic diseases

An increasing number of countries are facing a double burden of disease as the prevalence of risk factors for chronic diseases such as diabetes, heart diseases, and cancers increase and many countries still struggle to reduce maternal and child deaths caused by infectious diseases, for the Millennium Development Goals, according to the *World Health Statistics 2011* released by the World Health Organization (WHO).

Noncommunicable diseases, such as heart diseases, stroke, diabetes, and cancer, now make up two-thirds of all deaths globally, due to the population ageing and the spread of risk factors associated with globalisation and urbanisation. The control of risk factors such as tobacco use, sedentary lifestyle, unhealthy diet, and excessive use of alcohol becomes more critical. The latest WHO figures showed that about 4 out of 10 men and 1 in 11 women are using tobacco and about 1 in 8 adults is obese.

In addition, many developing countries continue to battle health issues such as pneumonia, diarrhoea, and malaria that are most likely to kill children under the age of 5. In 2009, 40% of all child deaths were among newborns (aged 28 days or less). Much more needs to be done to achieve the MDGs by the target date of 2015, but progress has accelerated:

Child mortality declined at 2.7% per year since 2000, twice as fast as during the 1990s (1.3%). Mortality among children under 5 years fell from 12.4 million in 1990 to 8.1 million in 2009.

Maternal mortality declined at 3.3% per year since 2000, almost twice as fast in the decade after 2000 than during the 1990s (2%). The number of women dying as a result of complications during pregnancy and childbirth has decreased from 546 000 in 1990 to 358 000 in 2008.

The report also shows that more money is being spent on health and people can expect to live longer (life expectancy in 2009 was 68 years, up from 64 years in 1990); but the gap in health spending between low- and

high-income countries remains very large: in low-income countries, per capita, health expenditure is an estimated US\$32 (or about 5.4% of gross domestic product) and in high-income countries it is US\$4590 (or about 11% of gross domestic product). High-income countries have, per capita, on average 10 times more doctors, 12 times more nurses and midwives and 30 times more dentists than low-income countries.

Virtually all deliveries of babies in high-income countries are attended by skilled health personnel; but this is the case for only 40% of deliveries in low-income countries.

World Health Statistics 2011 is an annual report based on more than 100 health indicators reported by WHO's 193 Member States and other reliable sources. These data provide a snapshot of the global health situation and trends. However, timely, accurate health information is hard to obtain in some parts of the world, because the country health information systems are weak.

- The release of the report coincides with the launch of WHO's new Global Health Observatory (<http://apps.who.int/ghodata/>), a new website that serves as a one-stop shop for data and analyses on health priorities around the world.

The Observatory provides easy access to the world's largest and most comprehensive collection of health data, bringing together WHO's data from all major health and disease programmes.

It includes easy access to over 50 databases and 800 indicators with analyses of the global health situation and trends, covering priority health topics such as child, maternal and reproductive health, infectious diseases, noncommunicable diseases and risk factors, environmental health, mortality and burden of diseases, road safety, health systems and equity.

An online version of the World Health Statistics dataset is also available through the Observatory.

Daily pill for HIV-negative people can prevent HIV

New data from studies in Kenya, Uganda, and Botswana confirm the major role of antiretroviral medicine in preventing heterosexual HIV transmission.

Results announced this month from two studies reveal that a daily antiretroviral tablet taken by people who do not have HIV infection can reduce their risk of acquiring HIV by up to 73%. Both daily tenofovir and daily tenofovir/emtricitabine taken as preventive medicine (PrEP – pre-exposure prophylaxis) can prevent heterosexual transmission of HIV from men to women and from women to men.

The Partners PrEP trial, conducted by the University of Washington's International Clinical Research Center, followed 4758 sero-discordant couples (in which one person had HIV infection and the other did not) in Kenya and Uganda. Couples received counselling and free male and female condoms. The uninfected partner took a once-daily tenofovir tablet, or a tenofovir/emtricitabine tablet, or a placebo pill. There were 62% fewer HIV infections in the group receiving tenofovir and 73% fewer HIV infections in the group that took tenofovir / emtricitabine than in the group receiving the placebo.

The TDF2 trial, conducted by the United States Centers for Disease Control, followed 1200 men and women in Botswana who received either a once-daily tenofovir/emtricitabine tablet or a placebo pill. The antiretroviral tablet reduced the risk of acquiring HIV infection by roughly 63% overall in the study population of uninfected heterosexual men and women.

Birth defects linked to smoking in pregnancy

Doctors are urging mothers-to-be to give up cigarettes after new research linked smoking in pregnancy to babies suffering birth defects such as club-foot, missing limbs, and deformed limbs. Those who smoke while expecting a baby increase the risk of their child being born with a serious malformation by as much as 50%, the study found. The disclosure led to calls for new measures to reduce what the authors called 'staggeringly high' levels of smoking among pregnant women.

UNAIDS welcomes first voluntary licence by pharma company

The Joint United Nations Programme on HIV/AIDS (UNAIDS) has welcomed a new licence agreement between the Medicines Patent Pool and the pharmaceutical company Gilead Sciences to increase access to antiretroviral therapy in developing countries. This is the first time a pharmaceutical company has signed an agreement with the Medicines Patent Pool and marks a turning point for future private sector collaboration in sharing innovation to advance the response to HIV.

Under the agreement, Gilead will share intellectual property on a range of medicines to treat HIV. The agreement will allow for the production of the HIV medicines tenofovir, emtricitabine, cobicistat, and elvitegravir as well as a combination of these products in a single pill known as the 'Quad.' Cobicistat, elvitegravir and the Quad are products still in clinical development. Companies interested in producing generic versions of the medicines for developing countries will be able to approach the Patent Pool to negotiate licencing terms.

'This agreement between the Medicines Patent Pool and Gilead and signals a new era in the response to HIV with private and public sectors working hand in hand for the best interests of public health,' said Michel Sidibé, Executive Director of UNAIDS. 'I hope today's announcement will inspire

other pharmaceutical companies to follow suit to share intellectual property and innovation to make new technological advances in HIV treatment available sooner to the people that need them most.'

The agreement is particularly significant as tenofovir is one of the first-line medicines for HIV recommended for use by the World Health Organization as per guidelines released in 2010. Under the new agreement tenofovir will also be licenced for use to treat Hepatitis B, a common and serious co-infection of HIV.

The inclusion of products still under development is a rare and important advance and will allow for generic versions of new medicines to rapidly enter the market, lessening the inequality between developed and developing countries in accessing new medicines.

In low- and middle-income countries, UNAIDS estimates that around 6.6 million people are currently accessing HIV treatment – however, a further 9 million are still in need.

The Medicines Patent Pool is a creative new approach which was established in 2010 with the support of UNITAID to increase access to newer antiretroviral medicines by creating a pool of patents and intelligence on antiretroviral production donated by medicine producers. It is currently in negotiations with six other patent holders.

India pledges continued availability of high quality generic drugs

UNAIDS has welcomed the assurance given by India's Commerce Minister, Mr Anand Sharma, that India will reject any efforts to include 'data exclusivity' clauses in bilateral trade agreements. This assurance came at a meeting between Mr Sharma and UNAIDS Executive Director Michel Sidibé, held at the Ministry of Commerce and Industry.

Welcoming the Minister's assurance, Mr Sidibé said, 'Millions of people will die if India cannot produce generic antiretroviral drugs, and Africa will be the most affected. For me, it is an issue of life or death.'

India's pharmaceutical industry produces more than 85% of the first-line antiretroviral drugs used to treat people living with HIV. The cost of the least expensive first-generation treatment regimen has dropped to less than US\$86 per patient per year. But as increasing numbers of people move towards more efficacious and tolerable first-line treatment, drug prices could double compared with first-generation regimens. In addition, as patients develop drug resistance and require more expensive and patent-protected second- and third-line antiretroviral medicines, some projections indicate treatment costs escalating by as much as 20-fold.

Countries pledge US\$4.3 bn in funding for child vaccines

At a meeting of world leaders, countries have pledged an \$4.3bn to help vaccinate children against preventable diseases like pneumonia. The Global Alliance on Vaccines and Immunisation (GAVI) says this funding milestone will save more than 4 million lives in the next 4 years.

It is estimated that three times as many children aged under 5 die from pneumonia and diarrhoea than from malaria and HIV/AIDS combined, despite new vaccines being available to help prevent such deaths. However, many developing countries cannot afford them. Drugs company GlaxoSmithKline has agreed to sell a vaccine for diarrhoeal disease at cost price to poorer nations, and some other firms have since made similar moves. GAVI has already rolled out a range of vaccines to children in 19 countries but the organisation says it needs the extra money to vaccinate those in 26 others.

Resources will also be spent on trying to reach millions of the poorest children who are missing out on basic vaccines against diseases such as measles, whooping cough, and tetanus.

Asthma link to premature births

Women with poorly-managed asthma have a higher chance of giving birth early or having a small baby, a review of evidence suggests.

Experts in Australia and the US also found a link with other complications, including pre-eclampsia. They say women with asthma should be monitored at least monthly during their pregnancy.

The researchers looked at asthma studies involving more than a million pregnant women published between 1975 and 2009. They found women with asthma gave birth to babies weighing on average 93g (0.2lb) less than the babies of mothers without asthma.

Having asthma increased a mother's risk of pre-eclampsia by at least 50%, while risks of pre-term birth were increased by about 25%.

Type 2 diabetes: study shows up to 80% have complications

New data published recently show that too high blood sugar levels, delay in beginning of insulin, and a high level of diabetes-related complications remain common place for many people with type 2 diabetes across the world.

Baseline data from A₁chieve, a type 2 diabetes study with 66 726 people from 28 countries across Asia, Africa, Europe, and Latin America, were presented at the 71st American Diabetes Association Congress in San Diego.

Data captured from people before any study insulins were begun showed that over all diabetes control was poor with an average blood sugar level (HbA_{1c}) of 9.5%, which is above the internationally recognised target of 7%.

Up to 75% of participants had cardiovascular disease. Up to 84% had other diabetes complications including kidney disease, eye problems, foot ulcers, and neuropathy. These data, however, also differ between the regions.

At the time of entering the study around 9% of patients had not received any glucose-lowering medication, despite having their mean HbA_{1c} level above 10%. Those who had received oral glucose-lowering medication before entering the study had a duration of diabetes of between 5.9 years in south Asia and 10.4 years in Latin America, suggesting a significant delay in the beginning of insulin therapy. Patients who had been previously started on insulin were given low doses and the dose was not increased over time as is often required due to disease progression.

Commenting on the data, Philip Home, Professor of Diabetes Medicine at Newcastle University, England said, 'This data highlights the constant need to improve the management of type 2 diabetes patients globally. It is clear from the data that beginning and optimisation of insulin therapy is often delayed, resulting in poor glycaemic control leading to diabetes complications.' The A₁chieve® is a global, prospective, observational, multi-centre, open-label, non-interventional, 24-week study of insulin analogues run by the pharmaceutical company Novo Nordisk. The study is evaluating adverse events and effectiveness of premix (biphasic insulin aspart 30 [NovoMix 30]), basal (insulin detemir [Levemir]), and meal-time (insulin aspart [NovoRapid]) insulin analogues in people with type 2 diabetes in near-routine daily clinical practice.

The primary aim of the study is to assess the adverse event profile of the study insulins, including rates of hypoglycaemia. In addition, effectiveness (HbA_{1c}, fasting plasma glucose, and postprandial plasma glucose) and patient quality of life outcomes are being measured. Comprehensive epidemiological data were collected at baseline, including recent plasma glucose results and hypoglycaemic episodes, prevalence of diabetes-related complications, and measures of current standards of care. Results will be available at the end of 2011.

individual countries are expected to

Sanofi and DNDi to generate new drugs for NTDs

The French drug company Sanofi, and Drugs for Neglected Diseases initiative (DNDi), a non-profit and research organisation, have signed a 3-year innovative agreement to generate new drugs for neglected tropical diseases (NTDs) throughout the world. The initiative is expected to help research and find new treatments for nine NTDs listed by the World Health Organization (WHO) in endemic countries: kinetoplastid diseases (leishmaniasis, Chagas disease, and human African

trypanosomiasis), helminth infections (lymphatic filariasis, onchocerciasis, and soil-transmitted helminthiasis), and dracunculiasis, fascioliasis, and schistosomiasis.

The partners will facilitate publication of the results to ensure access to the wider community of researchers focusing on NTDs, and say the public sector will benefit from the drugs developed through this agreement under the best possible conditions to ease access for patients in all endemic countries, irrespective of their level of economic development.

Huntington's disease breakthrough



Medical researchers may have uncovered a novel approach to treat an incurable and ultimately fatal neurodegenerative disease that affects hundreds of thousands of people.

Two international studies, one led by the University of Leicester in the UK and the other led by scientists in the USA, hold out promise for slowing down the development of Huntington's disease – and potentially, Alzheimer's and Parkinson's diseases. The research, which is in its early stages, represents an important milestone in understanding these debilitating conditions.

In Leicester, the groups of Dr Flaviano Giorgini and Prof Charalambos Kyriacou found that by genetically targeting a particular enzyme in fruit-flies, kynurenine 3-monooxygenase or KMO, they arrested the development of the neurodegeneration associated with Huntington's disease. Furthermore by directly manipulating metabolites in the KMO cellular pathway with drugs, they could manipulate the symptoms that the flies displayed. The fruit-fly study was published in the journal *Current Biology* on 7 June.

Study shows anti-HIV drugs prevent sexual transmission

United Nations agencies have lauded the results of an international study that shows that if an HIV-positive person immediately follows an appropriate treatment of anti-retroviral drugs, the risk of transmitting the virus to an uninfected sexual partner is nearly entirely eliminated.

The trial, conducted by the HIV Prevention Trials Network, tracked more than 1700 couples across Africa, Asia, Latin America, and the United States and found that the risk of infection fell by 96%.

The reduction in risk was so large that the trial was stopped some 3 to 4 years ahead of schedule.