

News bites

South Africa

Tunisian doctors help with staff shortage

Fourteen more Tunisian doctors arrived in South Africa in late April to work in public hospitals as part of a strategy to address the shortage of doctors, the health department announced. They will be placed in Mpumalanga, Limpopo and North West. Mpumalanga, which is the most severely understaffed, would take 11 of them. The move will alleviate critical shortages caused by the 78% reduction in community service doctors this year (due to the new 2-year local internship kicking in). A kickback corruption probe at the national health department's Foreign Workforce Management Programme, launched after the Tunisian country-to-country agreement, has since significantly slowed the legal processing of foreign-qualified doctors. This means that the two most productive sources of doctors for rural area postings have all but dried up.

Cholera victims in Soweto

The authorities were in early May battling to isolate the source of cholera that killed two Sowetan residents and the community is blaming local government's failure to provide basic services such as clean water and proper sanitation. The Gauteng Department of Health confirmed that two people living in the Chicken Farm informal settlement in Kliptown, Soweto, died after contracting the waterborne disease. 'The source of the infection has not been established, but an urgent investigation is underway to establish the source, identify and treat possible cases, and ensure no further spread of this illness,' a spokesperson for the provincial health department, Zanele Mngadi, said.

Soweto residents pointed to deep-seated problems related to poor sanitation facilities and lack of access to potable water. Patra Findane, national organiser for the Coalition Against Water Privatisation (CAWP), a pressure group agitating for free water for all in Soweto, said many more Kliptown residents were showing symptoms associated with cholera.

Government wants to appoint health pricing 'facilitator'

A draft Bill creating the position of a ministry-appointed facilitator for health pricing and inspectors who can enter any practice or institution, demanding access to documentation, information

captured on computers, and authorised to question personnel, has drawn vehement opposition from the South African Medical Association (SAMA).

The proposed amendments to the National Health Act were published on 18 April this year. SAMA says the bill is 'a violation' of constitutional rights and instead advocates a tariff-setting framework pre-negotiated and agreed upon by all relevant role players.

A 'watchdog' on health pricing was not required, but a proper structure to facilitate pricing, based on appropriate information, was.

In light of ongoing discussions with the Ministry of Health about the National Health Reference Price List (NHRPL), SAMA was 'shocked at the Minister's attempt to circumvent the current participatory process regarding the determination of prices in the health industry'.

SAMA immediately drafted a formal submission to the Department of Health, expanding upon its objection and said that a participatory environment of agreeing on tariffs was the best way forward.

Manto's plan could endanger SA hospitals

Is this the beginning of the end for South Africa's private hospitals? 'If things carry on as they are now, the private hospital industry will be in jeopardy,' says Mr Mike Schüssler, economist of T-Sec. Dr Manto Tshabalala-Msimang told private hospital groups recently that she would request that tariff increases be limited to CPIX. The Minister's decision gives rise to the question of what might be in store for other businesses in South Africa if the government is starting to determine the tariffs of private enterprises.

The bomb about the tariffs of private hospitals was dropped after medical funds had complained to the Registrar of Medical Schemes at the end of last year that the private hospital groups Netcare, Medi-Clinic, Life Healthcare and the New National Hospital Network (NNHN) intended implementing tariff increases of 9 - 10% this year and were also planning to increase theatre and ward fees, in particular, by a significant margin. The hospital groups have allegedly put pressure on the medical schemes to accept the increases. Although some of the groups have reduced their tariffs to CPIX after discussions this year, the private hospital

industry insists that CPIX is not the right basis for determining tariff increases. Mr Otto Wypkema, chief executive of the NNHN, says limiting tariff increases to CPIX is unheard of in the international hospital market and does not take private hospitals' inflation into account.

Africa

Ebola hits Ugandan health workers

Health workers are among the dead in an Ebola outbreak in Uganda, spreading panic among those needed to help. Doctors and nurses did not at first know what they were facing, and failed to protect themselves, according to a lawmaker representing the western area at the centre of the outbreak. Experts say the Ebola subtype that sparked the outbreak is new, and the classic Ebola symptoms were not always present, slowing diagnosis.

'We are facing a crisis in health care here,' said Jane Alisemera, the lawmaker representing Bundibugyo, the district 200 km from Kampala where the outbreak has claimed at least 18 lives. 'These health workers have already lost three of their colleagues and six more have contracted the disease. They are scared and morale is low. There is a very big shortage of nursing staff now at the hospital,' she said. According to the Ministry of Health's latest figures, Bundibugyo has 75 suspected cases of Ebola. 'The staff at the hospital didn't know they were dealing with a highly contagious outbreak so they took inadequate precautions,' Alisemera said. The hospital had no protective clothing at the time of the outbreak, even though aid agencies have since donated supplies. Two teams, including infection control doctors from the World Health Organization (WHO) and the United States Centers for Disease Control and Prevention, recently arrived in Uganda to help contain the outbreak.

The next killer disease?

West and Central Africa are emerging as the most likely potential sources for the next major infectious disease, a recent study claims. De-forestation in these regions is forcing wild animals that are a natural host for pathogens into ever-smaller areas and into ever-likelier contact with fast-growing human populations.

The paper, published in the *Proceedings of the Royal Society of London, Series B*, looks at how new killer diseases such as

AIDS, Ebola and bird flu have leapt the species barrier to humans in the past three decades.

Its authors found that closely related primates – monkeys, chimpanzees, gorillas and humans – pose the biggest risk of ‘host shift’, as they share similar biology and immune responses, and are vulnerable to many of the same microbes.

Humans are almost four times likelier to share pathogens with chimpanzees than with colobus monkeys, which branched from the family tree 34.4 million years ago.

The virus for AIDS was probably transmitted to humans from a chimpanzee infected with a simian form of AIDS, previous studies said. More than 25 million people have died of the disease since it was first reported in 1981. Some pathogens, especially viruses, are smart at adapting to a new host in close proximity.

‘Bird flu, West Nile virus and Hendra virus are all viral diseases that have jumped large evolutionary distances to infect humans,’ said lead researcher Jonathan Davies of the University of California at Santa Barbara. Avian influenza and West Nile virus have a natural reservoir in birds, while bats provide the host for Hendra virus.

‘We suggest hotspots of future emerging diseases may be found where humans come into close proximity with wild primates, as is increasingly the case in the forests of Central and West Africa, due to rapidly growing human populations and scarcity of resources,’ said co-author Amy Pederson of the University of Sheffield, northern England. Money could be invested in projects to prevent human-animal contact and in building early-warning networks to detect any disease outbreak.

International

Stem cells from menstrual blood?

Researchers seeking new and more abundant sources of stem cells for use in regenerative medicine have identified a potentially unlimited, non-controversial, easily collectable, and inexpensive source – menstrual blood.

Stromal stem cells – cells that are present in connective tissues – have recently been identified in endometrial tissues of the uterus. When the fresh growth of tissue and blood vessels is shed during each menstrual cycle, some cells with regenerative capabilities are present and collectable. While collecting menstrual blood stromal cells (MenSCs) directly from tissue would be invasive, retrieving them during the menstrual cycle would not be. ‘Stromal stem cells derived from menstrual blood exhibit

stem cell properties, such as the capacity for self-renewal and multi-potency,’ said Amit N Patel, Director of Cardiac Cell Therapy at the University of Pittsburgh’s McGowan Institute of Regenerative Medicine. ‘Uterine stromal cells have similar multi-potent markers found in bone marrow stem cells and originate in part from bone marrow.’

Published in an issue of *Cell Transplantation*, the study examined to what degree MenSCs demonstrated an ability to differentiate into a variety of cell lineages. Tests showed that MenSCs could differentiate into adipogenic, chondrogenic, osteogenic, ectodermal, mesodermal, cardiogenic, and neural cell lineages.

Brain exercise boosts IQ?

A group of neuropsychologists claim having found a task that can add points to a person’s IQ, *New Scientist* reports. So-called ‘fluid intelligence’, or *Gf*, is the ability to reason, solve new problems and think in the abstract. It correlates with professional and educational success and appears to be largely genetic. The publication claims that past attempts to boost *Gf* have suggested that, although by training you can achieve great gains on the specific training task itself, those gains don’t transfer to other tasks.

‘Now Susanne Jaeggi at the University of Michigan at Ann Arbor, USA, and her colleagues say that is not true...they invited 70 healthy adults to participate in a challenging training exercise known as the dual *n*-back task.’ The exercise involves tracking small squares on a screen that pop into a new location every three seconds. Volunteers have to press a button when the current location is a duplicate of two views earlier. At the same time, consonants are played through headphones and a button is pressed if the letter is the same as that heard two ‘plays’ earlier. If participants perform well, the interval to be tracked (*n*) increases to three or more stages earlier. Jaeggi’s volunteers were trained daily for about 20 minutes for either 8, 12, 17 or 19 days (with weekends off). They were given IQ tests both before and after the training. ‘The researchers found that the IQ of trained individuals increased significantly more than controls – and that the more training people got, the higher the score.’

However, not everyone is impressed. Robert Plomin, at the Institute of Psychiatry in London, says that no serious intelligence researchers consider *Gf* ‘immutable’, as the paper suggests.

New way to suppress HIV

Most drugs aimed at suppressing HIV target proteins lying on the virus itself,

but new research suggests that focusing on the human host’s immune cells might work even better. That’s because human cells mutate at much slower rates than does HIV, so the virus would have much less chance of mutating around the drug, scientists explained. The research is still in its early stages, but it ‘provides a very nice model that you can inhibit a cellular protein and affect HIV replication,’ explained co-senior author Dr Pamela Schwartzberg, a senior investigator at the US National Human Genome Research Institute. Her team recently published their findings in the *Proceedings of the National Academy of Sciences*. ‘If you are looking to affect a human protein, it’s going to be much less susceptible to the process of developing resistance,’ explained Rowena Johnston, vice-president of research at The Foundation for AIDS Research (amfAR) in New York City.

Alzheimer’s – potential cure

In a research breakthrough, a potential cure for Alzheimer’s disease has been developed in Germany, but it may not be practicable for human patients for another 10 years, scientists say. The new technique inhibits beta-secretase, an enzyme which is now known to be a main cause of senile brain decay. A report in *Science* described how researchers in Dresden, Germany used an ‘anchor’ to lodge the inhibitor in mice brains and prevent them succumbing to a mouse version of Alzheimer’s.

Anti-addiction medicines up suicide risk

Two years ago, scientists had high hopes for new pills that would help people quit smoking, lose weight and maybe kick other tough addictions such as alcohol and cocaine. The so-called ‘super pills’ worked in a novel way, by blocking pleasure centres in the brain that provide the feel-good response from smoking or eating. Now it seems the drugs may block pleasure too well, possibly raising the risk of depression and suicide. Margaret Bastian of suburban Rochester, New York, was among patients who reported problems with Chantix, a highly touted quit-smoking pill from Pfizer that has been linked to dozens of reports of suicides and hundreds of suicidal behaviours. ‘I started to get severely depressed and just going down into that hole ... the one you can’t crawl out of,’ said Bastian, whose doctor took her off Chantix after she swallowed too many sleeping pills and other medicines one night.

CHRIS BATEMAN