

News bites

International

UK's first cancer-gene-free baby born

The first baby girl in Britain to have been screened before conception for a genetic form of breast cancer, was born in mid-January. While a first in Britain, the strategy has been used elsewhere across the world to screen for the cancer-related BRCA1 gene variant, and the technique has also been previously applied by British doctors to avoid the transmission of other cancers and diseases.

In the current case, doctors at University College Hospital in London (UCL) had created a number of embryos through *in vitro* fertilisation for the baby's parents and screened them for the variant BRCA1 gene. Women who carry this genetic variation have an 80% chance of developing breast cancer and a 60% chance of suffering ovarian cancer during their lifetime, and the couple's children were at very high risk of inheriting the gene. However, carrying the gene does not make cancer inevitable.

'This little girl will not face the spectre of developing this genetic form of breast cancer or ovarian cancer in her adult life,' said Paul Serhal, Medical Director of the Assisted Conception Unit at UCL. 'The parents will have been spared the risk of inflicting this disease on their daughter. The lasting legacy is the eradication of the transmission of this form of cancer that has blighted these families for generations.'

The mother and baby girl, who have not been identified, are doing very well. The embryo was chosen using pre-implantation genetic diagnosis which involves testing cells to see if they contain the faulty gene. An embryo found not to have the gene was then implanted into the mother. The Human Fertilisation and Embryology Authority (HFEA), the regulator which had to approve the procedure, said the chosen embryo had not been genetically manipulated or programmed.

Recession increases waistlines

People may reduce the amount they spend on food in response to a sour economy, but some experts fear they may pick up weight in the process. The spectre of 'recession pounds' is a concern weighing on health professionals, who point to numerous studies linking obesity and unhealthy eating habits to low incomes. They fear that as people cut food spending they will

cut back on healthy but relatively expensive items such as fresh fish, fruit, vegetables and whole grains, in favour of cheaper options high in sugar and saturated fats. 'People ... are going to economise and as they save money on food they will be eating more empty calories or foods high in sugar, saturated fats and refined grains, which are cheaper,' said Adam Drewnowski, the director of the Nutrition Sciences Program at the University of Washington in Seattle, USA. 'Things are going to get worse,' he told *Reuters* in a telephone interview. 'Obesity is a toxic result of a failing economic environment.'

Said Eileen Kennedy, Dean of the Friedman School of Nutrition Science and Policy at Tufts University outside Boston: 'The reality is that when you are income constrained the first area you try to address is having enough calories in your diet. And cheap sources of calories tend to be high in total fats and sugars.'

There is anecdotal evidence to support such concerns including the success of US fast-food giant McDonald's, which has a low-priced menu that is high in fat and calories. Chief Executive Jim Skinner said last October that the world's largest hamburger chain 'continues to be recession resistant' after it posted a better-than-expected third-quarter profit, helped by a 7% jump in global sales. By contrast, other chains associated with healthier eating have seen their fortunes sag with the economy.

Brit dies of rabies contracted in SA

A British woman believed to have contracted rabies while working in an animal sanctuary in South Africa, died of the disease on 13 January, her family said.

Lisa McMurray had been in a critical condition in the Royal Victoria Hospital in Belfast, Northern Ireland, since being diagnosed in December. Her brothers said in a statement that they were devastated by her death. She is thought to have been infected while working in South Africa. She recounted in e-mails how she had been scratched while separating two dogs, one of which was put down after it started foaming at the mouth. McMurray, who was in her 30s, began to feel unwell a few months after returning home.

Health officials in Belfast said that McMurray had posed 'no risk to other patients or to visitors,' saying there was no documented case of human-to-human

transmission of rabies anywhere in the world. Cases of rabies in Britain remain 'very rare' – the last human case involving a dog bite sustained here was in 1902. There have been 23 cases of rabies reported to the Health Protection Agency since 1946, the last being in 2005. All of them were contracted abroad.

Mixing drugs a danger – especially for elderly

Potentially dangerous mixing of medications is common among older people and non-prescription drugs are the culprit more than half of the time, according to a new study, published in the *Journal of the American Medical Association* this January. US researchers found nearly 1 out of every 25 people aged 57 - 85 took dangerous combinations of drugs with the potential for serious interactions. For men aged 75 - 85, it was as high as 1 in 10.

'The public has an awareness that two prescription medications used together might be dangerous,' said study author Stacy Tessler Lindau of the University of Chicago Medical Center. 'But what people don't fully appreciate is that non-prescription drugs can interact with prescription drugs and even other non-prescription drugs.'

About a third of older adults use 5 or more prescriptions and about half use over-the-counter medications and dietary supplements, the study found. More than half of older adults used 5 or more prescription medications, over-the-counter medications or dietary supplements while 29% took more than 5 prescription medications. More than half of the dangerous drug combinations included the use of aspirin or blood thinners such as warfarin. The most common dangerous combination of non-prescription drugs was *Ginkgo biloba* and aspirin, which can increase the risk of internal bleeding when taken together.

Researchers at the University of Chicago studied the medication use of 3 500 people aged 57 - 85 living independently across the USA to create a representative sample. When extrapolated to the general population, the study found that some 2.2 million people were at risk from dangerous combinations of medications. US adults over the age of 65 are taken to the emergency room more than 175 000 times every year because of bad reactions to medication.

Africa

Pay for Zim doctors 'untenable'

Zimbabwe's striking doctors and nurses have turned down a new pay increase offer of US\$50 to US\$850, insisting on their original demands that their salaries be raised to at least US\$2 000, it was reported in mid-January.

The state-owned daily *Herald* reported that the health personnel had been given the US\$50-850 offer over and above their normal earnings, but it was rejected as being too little to cover their monthly needs. However, an official with the Zimbabwe Hospitals Doctors' Association who declined to be identified dismissed as 'totally false' the *Herald* story. 'We have not yet received anything concrete from the government. The last time we communicated they indicated that they were able to pay doctors US\$240 a month,' he said, while nurses were offered 'something very shameful'. The official added: 'We will not return to work until our needs are addressed. Our demands are reasonable. We cannot work on empty stomachs. We're not responsible for the escalation of prices in the country.' Zimbabwe Health Minister David Parirenyatwa said it was too early to comment and that the issue of salaries was a 'confidential' one. 'But I can tell you that we have put a good proposal to our health staff and we hope they will take it and end this impasse. It has cost so many innocent lives and caused a lot of suffering,' he said.

Doctors and nurses in Zimbabwe went on an industrial action starting last September

to force Harare to review their salaries. At the time they were earning less than US\$20 dollars a month in a country with the highest inflation in the world. They also demanded that hospitals be given modern equipment and adequate medication for treating patients. The health personnel strike coincided with the outbreak of a cholera epidemic that has claimed close to 2 000 lives since its outbreak in August.

South Africa

Hogan and GPs settle dispensing fee dispute

Health minister Barbara Hogan has reached an out-of-court settlement with the National Convention on Dispensing (NCD) by agreeing in principle that the dispensing fee for doctors should be increased to 30%. The agreement was reached at a meeting of the two parties on 12 January, called at the invitation of Hogan and attended by Molefi Sefularo, the deputy health minister, and Anban Pillay, the cluster manager for pharmaceutical and planning.

The NCD, which represents about 6 000 general practitioners (GPs) who have permits to dispense medicines, served the department of health with court papers last month, following numerous talks that failed to find a solution acceptable to all parties.

Yesterday was the deadline for the department to submit a reply to the affidavit filed by the NCD.

NCD chairman Norman Mabasa said: 'We have agreed in principle that there should be a proclamation of a new figure. (Hogan and her team) said we must not withdraw the court case until what we have agreed on is in writing.' The NCD will ask its lawyers to grant the department an extension to respond to the affidavit. The cap for the 30% has not yet been set, but it is expected to be more than R60.

Last year the Department of Health reviewed the dispensing fee and ruled that doctors should charge R16 maximum for items of less than R125. For more costly items the fee was not supposed to exceed R20. The NCD declined the offer and proceeded with legal action. The latest agreement will be discussed by the pricing committee before a formal recommendation is submitted to Hogan.

64 new cholera cases in SA

Some 77 new suspected and confirmed cholera cases were reported in South Africa on 12 January as parts of the Tubatse River in Limpopo tested positive for the disease. There were 64 new suspected cholera cases reported in Limpopo and Gauteng. A total of 13 confirmed cholera cases were reported in the Western Cape, KwaZulu-Natal and North West Limpopo Water Affairs chief director Alson Matukane said ongoing tests of water resources in the province indicated that parts of the Tubatse River in the Steelpoort area were contaminated with cholera. However, he said other parts of the river tested negative.

CHRIS BATEMAN

Single suture

Why thalidomide spared mouse pups

The reason for the tragedy of thalidomide in the 1950s was that birth defects did not show up in mice pups during safety testing. Now the compound that protected mice has been identified, which may lead to safer versions of the drug. Thalidomide is now known to be a powerful anti-cancer agent.

Jürgen Knoblock and colleagues at the University of Cologne have found that when chicken and human embryos are exposed to thalidomide they produce superoxide, a powerful oxidising agent that causes cell death and birth defects. Mice are apparently protected from superoxide because they also make glutathione, an antioxidant that mops up the superoxide before it can damage cells. Human and chicken embryonic cells treated with glutathione had reduced levels of superoxide and less cell death.

This research could lead to a modified form of thalidomide that doesn't produce superoxide, but retains its cancer-fighting properties.

New Scientist, 15 November 2008.