

## Overseas briefs

### *World Health Organization*

**This material has been summarised from information on the World Health Organization Internet site. A link to this site can be found under 'Other Australian and international communicable diseases sites' on the Communicable Diseases Australia homepage.**

### *Cholera in Nigeria*

As of 26 November 2001, the World Health Organization (WHO) has reported a total of 2,050 cases of cholera and 80 deaths in Kano State in Kano Metropolis. WHO is working with the State Ministry of Health to control the outbreak. A cholera camp has been set up and mobilisation teams have been formed to trace contacts, carry out disinfection of houses and other areas, and provide health education. WHO has also supplied cholera kits.

One hundred and twenty cases of cholera have also been reported in Jigawa State. WHO is working with the Federal Ministry of Health and a team from Kano State to investigate this outbreak.

### *Ebola haemorrhagic fever outbreak now under control*

The outbreak of Ebola haemorrhagic fever that has killed 34 people in Gabon and the Republic of Congo is under control, the World Health Organisation (WHO) said on 31 January 2002. "We are satisfied the epidemic has calmed," said David Heymann, head of WHO's Communicable Disease Division, who credited "a great government commitment" in Gabon for containing the outbreak. A total of 23 people have died in Gabon. The other 11 victims were in the neighbouring Republic of Congo. The United Nations health agency has relied on Gabonese efforts to halt the epidemic but would send international experts back to the region if necessary, Heymann said.

### *Tularemia - Kosovo*

As of 17 January 2002 the Institute of Public Health in Pristina has reported 282 cases of tularemia since the outbreak began on 1 November 2001, 59 of which have been laboratory confirmed. There

have been no deaths to date. The majority of cases have been detected in rural areas, mainly in the Lipjlan, Ferijaz, and Pristine municipalities. The patients have been between 16 and 44 years of age.

Tularemia is endemic in many parts of the world, including North America, eastern Europe, China, Japan, and Scandinavia. It is a bacterial disease normally transmitted from animal hosts and has various clinical manifestations. Symptoms include high fever and body aches, swollen glands and difficulty with swallowing, which continue for about 2 weeks.

The investigation of the outbreak continues, and measures for case management, environmental control, and health education are in place. The last outbreak of tularemia in Kosovo occurred in April 2000.

### *ProMED-mail*

**This material has been summarised from information provided by ProMED-mail (<http://www.promedmail.org>). A link to this site can be found under 'Other Australian and international communicable Diseases sites' on the Communicable Diseases Australia homepage.**

### *Vaccine for some exposed to anthrax*

Source: Reuters Online, 15 December 2001 (edited)

The United States government may offer anthrax vaccinations to some people exposed to the bio warfare agent in mail attacks so they would not get sick once they stop taking antibiotics. People exposed to high doses may still have potentially deadly anthrax spores in their lungs after taking the recommended 60-day course of antibiotics. As many as 3,000 people are at risk of having lingering spores and might be candidates for an anthrax vaccine. (This was approved on 18 December 2001; <http://www.nytimes.com/2001/12/19/national/19VACC.html>).

The vaccine is approved for preventing anthrax before exposure. Giving it after someone comes in contact with the biological warfare agent would be done on an experimental basis only. Alternatives to vaccination include advising people to watch for symptoms and to keep in close touch with their

doctors after their 60-day course ends or extending antibiotic treatment to 90 days. About 10,000 people were urged to take the 60-day treatment because they were exposed to anthrax through tainted letters sent to media outlets and 2 United States senators. No-one who has finished the 60-day therapy has developed anthrax.

*Milk replacement possible source of BSE, Denmark*

Source: Danish Veterinary and Food Administration, 21 December 2001

Denmark is investigating a possible link between bovine spongiform encephalopathy (BSE) and milk replacements. So far detailed reports have been completed on the first 3 cases of the 7 BSE cases in cattle born in Denmark. Two of these cases were born after the ban on the use of mammalian meat and bonemeal (MBM) to ruminants was put into force. It appears that the only feed which has been used in all 3 BSE-positive herds, is a German milk replacement, but contamination with MBM in other feed products used in the herds cannot be ruled out. According to the producer of the milk replacement, the products contain fat derived from bones from cattle and swine delivered from slaughterhouses in several European Union (EU) member states. At the time of production of the batches of milk replacements that were used in BSE infected herds, it was not obligatory to remove specified risk material in the slaughterhouses in all EU member states. Therefore there is a risk that the product might have been contaminated with fat produced from parts of spinal cord and brain from BSE positive cattle.

Denmark's BSE reference laboratory, the Danish Veterinary Laboratory (DVL), is currently conducting a risk evaluation on the use of animal fat as feed for ruminants and the risk entailed using the milk replacements on the market in Denmark. The risk evaluation is made with reference to a possible tightening of the rules concerning production, import, and use of these feed stuffs. DVL is also conducting an epidemiological investigation into the possible causal association of BSE and milk replacements. If the product in question has been used by most Danish farmers, a causal relation

between a case of BSE and the use of this milk replacement on the farm is less likely. It is expected that the results of the above mentioned investigations might be available in mid-2002.

*BSE cattle born after feed curbs cause concern*

Source: *The Guardian*, 25 January 2002 (edited)

Scientists are trying to explain a sudden rise in the number of bovine spongiform encephalopathy (BSE) infected cattle born after tough feed controls were meant to throttle the disease. Over 6 weeks, 4 such animals have been diagnosed, bringing the total to 10, and more are likely now that the government has stepped up testing. The European commission has signalled it would consider imposing new export controls on British beef if the number rose to more than 50 in 12 months.

The latest case to be announced was a Friesian cow which had spent its entire life in Leicestershire, but there has been a wide geographical spread of cases, including 2 in Northern Ireland, causing difficulties for officials trying to pinpoint causes of infection, likely to have been well over 5 years ago.

Although officials say there is no food safety risk because the animals are too old to go into the food chain, frustration is growing among government advisers. There is increasing suspicion that mammalian meat and bone meal continued to reach calves after August 1996, when feed laws were strengthened, either through supplies being kept on farms or through cross contamination.

Scientists have hypothesised that some animals might get the disease when in the womb, but it is understood maternal transmission appears unlikely in most confirmed cases. The possibility exists that BSE is being spread on a small scale through pastures being contaminated by excrement from infected cows.

*Opinions about the origin of BSE and other BSE-related issues*

Source: European Commission Press Releases, 5 December 2001 (edited)

The Scientific Steering Committee (SSC), which advises the European Commission about bovine spongiform encephalopathy (BSE) and other multidisciplinary issues, published new opinions on the origin and transmission of BSE, on the BSE cases found in the United Kingdom (UK) among

cattle born after the ban on feeding meat-and-bone meal (MBM), and on the surveying requirements for obtaining reliable data on the prevalence of BSE and transmissible spongiform encephalopathies (TSE) in cattle, sheep, and goats. The committee also updated a standing opinion on the sourcing of ruminant materials for medical devices.

The opinion on the origin and transmission routes for BSE mainly confirms the standing scientific consensus hypotheses of a prion of unknown origin as the agent for transmitting the disease mainly via feed and cross contamination of feed, and to a lesser extent, via maternal transmission. The SSC considers that not one of the alternative hypotheses about a 'third' transmission route has so far been substantiated by scientific evidence. Evidence is equally very limited if not absent for hypotheses about factors influencing the susceptibility of cattle to BSE.

The 6 BSE cases found so far in the UK among cattle born after the August 1996 ban on feeding MBM to cattle currently give the SSC no reason to assume there is a higher BSE risk in the UK than previously assumed. Therefore there is no need to revise scientific advice on the UK Data Based Export Scheme (DBES) of any other BSE-related opinions.

The committee further adopted an opinion on the surveying and testing requirements for obtaining statistically authoritative and reliable data on the prevalence of BSE and TSE in cattle, sheep, and goat populations in the European Union. The opinion sets out the technical criteria for sample design, sample size, confidence intervals, etc. Sampling of the cattle population should be targeted on the group of so-called risk animals (for example, fallen stock). This also means the sample size can be kept significantly lower than in the case of sampling healthy animals sent for slaughter. In the goat and sheep population risk animals are much more difficult to identify. Therefore, the survey for most countries will need to be targeted at healthy animals sent for slaughter, and will need to cover a larger number of animals. Surveys would have to be accompanied by measures ensuring that animals suspected of being infected with TSE are not deliberately kept outside the testing program.

The SSC further updated its opinion on the safe sourcing of medicinal products from countries where BSE is highly unlikely to be present. The use of catgut sourced from such countries does not present a risk according to the scientists.

### *Scientists widen BSE checks to deer*

*Source: The Guardian, 24 December 2001 (edited)*

Government scientists are to check deer to see whether they harbour BSE-like diseases under a research program designed to close loopholes in the battle against a menace that has probably killed more than 100 Britons since 1995 and dogged agriculture for nearly 10 years longer.

Precautionary steps to reassure officials about the safety of venison will involve collecting specimens from farmed animals to check their brains and tonsils for both BSE and a similar killer of deer and elk in the United States, chronic wasting disease (CWD). Britain's large wild deer population may also be monitored for the 2 diseases, although no laboratory experiment to ascertain whether BSE in cattle can be transmitted by injection or feed to deer has been attempted.

A Department of the Environment spokesman said that veterinary laboratories already cross-checked some deer samples collected for other purposes and had found no evidence of BSE-like diseases.

### *First case of BSE in Finland*

*Source: Ministry of Agriculture and Forestry, 7 December 2001 (edited)*

The Finnish Ministry of Agriculture and Forestry has announced that Finland has its first confirmed case of bovine spongiform encephalopathy (BSE) in a cow. The case was confirmed in the EU reference laboratory on 7 December 2001. The cow had shown clinical signs of disorder and was slaughtered. The initial Western Blot examinations in the national reference laboratory had already shown strong evidence of a positive case.

The 6-year-old cow was born in Finland. No MBM has been used on the farm for over 20 years. There is not evidence as yet of the source of the infection. All bovine animals on the farm of origin, all cohort animals, and the progeny of the positive animal have been destroyed.

The identification of a clinical case of BSE in Finland underlines the great importance of clinical veterinary surveillance. Finland has carried out a

relatively low number of BSE tests in slaughtered cattle; figures can be obtained at: <<http://www.bsereview.org.uk/data/cattle-tested-oct01.htm>>.

Finland was identified, within the European Union assessment of the geographical BSE-risk (GBR) of European and other countries, to belong to 'Category II', where BSE is unlikely but it cannot be excluded that cattle is infected (clinical or sub-clinical) with the BSE agent. The report on Finland's GBR was published in July 2000: <[http://europa.eu.int/comm/food/fs/sc/ssc/out118\\_en.pdf](http://europa.eu.int/comm/food/fs/sc/ssc/out118_en.pdf)>.

Of the other European countries in Category II group, several have indeed been found infected since the publication of their relevant reports. During 2001, BSE has been identified for the first time in local cattle in Italy, the Czech Republic, the Slovak Republic, Slovenia and Greece, bringing the number of infected European countries to 17. So far, Japan is the only non-European country where BSE has been identified in non-imported cattle.

#### *First case of BSE in Austria*

Source: *Office International des Epizooties*, 14 December 2001 (edited)

On 6 December 2001, the preliminary rapid test for bovine spongiform encephalopathy (BSE) showed a positive result for a cow from the federal province of Lower Austria (Niederosterreich). On the same day that the BSE contingency plan came into effect, the provincial authorities were informed and movement restrictions were placed on all the animal carcasses at the slaughterhouse. The test was repeated on 7 December 2001 and followed by the immunohistochemical test as an additional method. Both the rapid test and the immunohistochemical test showed positive results.

Since 1 January 2001, all slaughtered bovines aged more than 30 months are subject to examination in the course of the all-Austrian Surveillance Programme. Furthermore, all suspect animals are also examined for BSE. The total number of examinations carried out up to 9 December 2001 was 217,970.

#### *Quinacrine treatment of vCJD patient unsuccessful*

Source: *BBC News Online*, 2 December 2001 (edited)

A British woman who became the first human case in trials to find a cure for variant Creutzfeldt-Jakob disease has died. The patient's condition improved dramatically after she received a course of the antimalarial drug quinacrine. It is thought that the 21-year old woman was taken off quinacrine after she showed signs of hepatotoxicity.

#### **Reference**

Korth C, May BC, Cohen FE, Prusiner SB. Acridine and phenothiazine derivatives as pharmacotherapeutics for prion disease. *Proc Natl Acad Sci* 2001;98:9836-9841.

#### *Cholera hits Zanzibar*

Source: *TOMRIC News Agency (Dar es Salaam)*, 5 December 2001 (edited)

An outbreak of cholera is threatening the Zanzibaris. "At least 10 people have died in the latest cholera outbreak and the epidemic is spreading from urban to rural areas," the Director of the Preventive Service in the Zanzibar Ministry of Health, told reporters here yesterday.

#### *Cholera in South Africa (KwaZuluNatal Province)*

Source: *Business Day*, 4 January 2002 (edited)

The KwaZuluNatal health department has stepped up the provision of fresh water and has intensified its health education campaign following another cholera outbreak in the province. At least 119 out of the 140 new cholera cases in the province are in the Ladysmith area.

#### *Cholera in Malawi*

Source: *Reuters*, 4 January 2002 (edited)

A cholera outbreak in central and southern Malawi killed at least 28 people in December 2001. Controller of Preventive Health Services Habib Somanje said the country had recorded 28 deaths

out of a total of 1,394 cholera cases during the month.

The highly contagious waterborne disease first appeared in early December in the southern lakeside district of Mangochi, which borders Mozambique, before it spread to central Malawi. Cholera outbreaks are common in Malawi during the rainy season between October and April because of poor sanitation and limited access to potable water.

### *Dengue fever cases in the Cook Islands*

Source: *Pacific Islands News*, Thursday 13 December 2001 (edited)

The Cook Islands recorded 3 cases of dengue fever in November 2001. These cases were reported between 26 and 28 November 2001 and all 3 victims contracted the illness in the capital, Rarotonga.

News that mosquitoes carrying the disease were at large in the Cook Islands came almost a month after 2 tourists arriving from French Polynesia were hospitalised with the illness. It is the second time this year that local cases have been reported after imported cases were discovered.

The Health Ministry said it had carried out an eradication program to wipe out the disease-carrying insects in the areas where the cases were reported. However, the recent bad weather delayed the spraying operations by several days. Other parts of the Pacific have experienced high levels of the potentially fatal disease this year.

A total of 9 cases have been reported to authorities in the Cook Islands this year, although 5 of these have been imported from abroad. The situation in the Cook Islands is far less serious than in other Pacific Nations. Samoa and French Polynesia have recently suffered from major outbreaks of the mosquito-borne disease.

### *Last foot and mouth disease infected area is classified disease free*

Source: DEFRA press release 14 January 2002

Midnight 14/15 January saw a landmark in the fight against foot and mouth disease (FMD), when Northumberland was reclassified as FMD-free. It is not the official end of the FMD outbreak though it is a most welcome landmark.

The reclassification of Northumberland as FMD-

free follows the reclassification at the start of the year of North Yorkshire, Cumbria and Durham and means that all counties in Britain now have FMD-free status so far as livestock movements are concerned.

The move follows the completion of a huge surveillance operation with over 3 million sheep tested for signs of the disease. The reclassification of Northumberland had been delayed due to the need for further detailed investigations into some blood test results which suggested that sheep could have been exposed to disease. These investigations indicated that no active virus was present, thus allowing Northumberland to attain FMD-free status.

The change in classification eases restrictions on animal movements. Livestock from Northumberland will now be able to move under local authority licence throughout the country.

Restrictions remain on some individual farms across GB which were culled out as infected premises or dangerous contacts until cleansing and disinfection work is complete or until 12 months has elapsed since preliminary disinfection if secondary cleansing and disinfection is not undertaken. Most cleansing and disinfection has been completed or will be done by the end of February 2002. A very small number are likely to remain under restriction in the coming months.

Restrictions also remain on exports. Meat and live pigs can be exported under control, though not yet from all counties. The EU Standing Veterinary Committee will consider over the coming weeks further easing of export controls.

Additional serological surveillance was undertaken in several counties, including Northumberland, where there were high sheep populations and a history of heavy infection, in order for the Chief Veterinary Officer to be confident about the disease status of flocks in those counties.

### *Ban on measles vaccination lifted*

Source: *El Moudjahid*, 25 December 2001 (edited)

The study commissioned by the Minister of Health on the cause of the deaths of 7 out of 37 infants who had received measles vaccinations in the district of Mascara concluded that the deaths were due to 'a non-respect of rigorous procedures on preparation' of vaccines to be administered.

An epidemiological study was conducted by a team of specialists. The doctors who studied the

incident concluded that it was 'an isolated case of programmatic error'. There was an error in reconstitution of the vaccine with use of a solvent (as a diluent) other than that supplied by the Algerian Pasteur Institute.

The first investigations showed in effect that the lyophilised vaccine was reconstituted at the time of vaccination, and due to an error 'related to service management' was reconstituted with an inappropriate liquid, which was not sterile water and which – once administered to the infants – acted as a mortal poison. The exact nature of the product, its composition and the conditions behind its utilisation will be announced publicly once the epidemiological and toxicological investigations in Algeria and outside the country are completed.

### *Malaria cases increase sharply nationwide, Indonesia*

Source: *The Jakarta Post*, Jakarta, 19 January 2002

Cases of malaria have been increasing since 1998, and have so far occurred in 13 provinces, 16 districts, and 106 villages throughout the country, affecting 15 million Indonesians.

The resurgence of malaria in Indonesia has been observed since 1997. In Java the incidence rose from 12 per 100,000 population in 1997 to 38 per 100,000 population in 1999. The increase in Java has been attributed to an increase in ponds used for fish farming. However, the World Health Organization (WHO) Regional Malaria Advisor stated in a WHO paper that 'adverse impact of economic crisis in the region has paralysed malaria control and caused focal outbreaks, more pronounced in Thailand and Indonesia. Conflict and civil unrest has exacerbated malaria in many countries of the region. Health services are scarce for people in need, particularly those who live in remote and border areas. Decentralisation inspired from political changes in Indonesia has caused confusion at implementation level and weakened the health services including malaria control'.

### *Rats may transmit hepatitis E virus in US*

Rats roaming the streets of some United States (US) cities appear to be infected with a virus that is similar to the human hepatitis E virus (HEV), California researchers report. The investigators believe that rats might be the elusive source of this disease among urban residents who show signs of past exposure. In general, infection with HEV is not

life threatening and lasts for one to 4 weeks. Other types of liver-infecting viruses, including hepatitis B and C viruses, can linger in the body for years and cause serious damage to the liver. HEV is relatively common in central Asia, but it is rare in the US and other developed nations.

'Although HEV infection is very, very rare in the US, there's a fair amount of antibodies for the disease among the derelict, inner city population and this research suggests that rats may be a source,' said study co-author Robert Purcell, head of the Hepatitis Viruses Section of the National Institute of Allergy and Infectious Diseases. A study of homeless people living in Los Angeles showed that 15 per cent had antibodies to HEV, which indicates they had been exposed to hepatitis E virus at some point in the past. "It certainly doesn't prove a connection, but if you're dealing with someone who's living in a region who might have contact with wild rats, it's something that doctors have to keep in mind," Purcell told Reuters Health.

Purcell pointed out that in many parts of the world the virus has developed into a long standing and serious problem. The infection can be life threatening in pregnant women. "HEV has become the single most important cause of acute clinical hepatitis among adults in much of Central Asia and South East Asia," he noted. "So although right now you can count American HEV cases on the fingers of one hand, the virus has risen from the exotic to the topical."

### *Yellow fever vaccine shortage threat*

Source: *BBC News Online*, 21 December 2001 (edited)

Researchers have warned that there is too little yellow fever vaccine to cope with future outbreaks of the disease. Nicolas Nathan and colleagues highlight the problems encountered by Guinea in Africa, when it faced an outbreak in 2000.<sup>1</sup>

Yellow fever is a viral disease transmitted by mosquitoes. In the most severe outbreaks, over half of those affected can die. WHO estimates that 200,000 people in 34 countries across Africa and America are infected with yellow fever every year, leading to around 30,000 deaths. The disease can be prevented by vaccination, which protects for at least 10 years.

In their paper, Nicolas Nathan and colleagues<sup>1</sup> from Epicentre, Paris, France, state that: "Yellow fever epidemics are re-emerging in Africa and America, and the occurrence of repeated rural outbreaks increases the risk for major urban epidemics.

However, the international stocks of yellow fever vaccines are not sufficient to provide an adequate and rapid response to large outbreaks." He highlighted an yellow fever scare in Kano city, Nigeria, which has 1.5 million inhabitants, in 2000, and said if that had developed into an epidemic, there would not have been enough vaccine to cope.

The International Coordinating Group on Vaccine Provision for Epidemic Meningitis Control suggested that UNICEF's stockpile of 2 million doses should only be used in response to outbreaks. He said stockpiling would limit shortages, but added: "Prevention of yellow fever epidemics can only be addressed by organising pre-emptive mass vaccination campaigns or by large and effective introduction of yellow fever vaccination in the expanded programs of immunisation of the countries at risk, as recommended by the WHO."

### Reference

1. Nathan N, Barry M, Van Herp M, Zeller H. Shortage of vaccines during a yellow fever outbreak in Guinea. *Lancet* 2001;358:2129-2130.

### *Vaccination-associated deaths in Brazil*

Source: *Virology*, 290, No.2, 309-391, 25 Nov 2001 (Abstract, edited)

The yellow fever (YF) 17D virus is one of the most successful vaccines developed to date. Its use has been estimated to be over 400 million doses with an excellent record of safety. In the past 3 years, yellow fever vaccination was intensified in Brazil in response to higher risk of urban outbreaks of the disease. Two fatal adverse events temporally associated with YF vaccination were reported. Both cases had features similar to yellow fever disease, including hepatitis and multi-organ failure.

Two different lots of YF 17DD virus vaccine were administered to the affected patients and also to hundreds of thousands of other individuals without any other reported serious adverse events. The lots were prepared from the secondary seed, which has been in continuous use since 1984.

Nucleotide sequencing revealed minor variations at some nucleotide positions between the secondary seed lot virus and the virus isolates from patients; these differences were not consistent across the isolates, represented differences in the relative amount of each nucleotide in a heterogeneous position, and did not result in amino acid substitutions.

Inoculation of rhesus monkeys with the viruses isolated from the 2 patients by the intracerebral (ic) or intrahepatic (ih) route caused minimal viraemia and no clinical signs of infection or alterations in laboratory markers. Central nervous system histological scores of rhesus monkeys inoculated ic were within the expected range, and there were no histopathological lesions in animals inoculated ih.

Altogether, these results demonstrated the genetic stability and attenuated phenotype of the viruses that caused fatal illness in the 2 patients. Therefore, the fatal adverse events experienced by the vaccines are related to individual, genetically determined host factors that regulate cellular susceptibility to yellow fever virus. Such increased susceptibility, resulting in clinically overt disease expression, appears to be extremely rare.

### *Other*

#### **Reports from other sources.**

#### *Doctors' smoking cohort study ends*

Source: *News roundup, BMJ* 2001;323:1270, 1 December 2001

After running for 50 years, the cohort study on the smoking habits of 40,000 British doctors, which helped to establish the link between smoking and lung cancer, has ended with a valedictory thank you letter to the surviving doctors who were recruited in 1951.

Professor Sir Richard Doll, emeritus professor of medicine at Oxford University, who wrote the letter and was involved in the study since its inception, said it was devised by Sir Austin Bradford Hill to achieve maximum publicity for the critical relationship between smoking and lung cancer. The link was first established by him in a trial in 1947-49, but rejected by the Department of Health cancer committee, and not believed by a public, in which 80 per cent of men smoked.

Dr Maurice Gaba, was one of those recruited at the beginning of the study. Dr Gaba, said: "I was a forty a day man, when I received a letter in 1951 from a professor asking me about my smoking history, ending with a request to view my death certificate. I thought this doctor cares more about my health than I do, and I have never smoked since."

*Adult deaths from chickenpox increasing in UK*

Source: *BMJ* 2001;323:1091-1093. In: *Reuters Health eLine*, 12 November 2001

The number of adult deaths from chickenpox is increasing in England and Wales, according to the results of a study.

Professor Norman Noah from the London School of Hygiene and Tropical Medicine and colleagues reviewed the 1995 to 1997 death certificates from England and Wales in which chickenpox or varicella (the virus responsible for the disease) were mentioned. Of the 119 death certificates obtained, the study team estimated that 94, or 79 per cent, were genuinely attributable to chickenpox.

According to the authors, chickenpox is responsible for approximately 25 deaths annually, with fatality of around one in 10,000 cases. Deaths in adults accounted for 48 per cent of all deaths from chickenpox in 1967 to 1977, but have risen to make up 81 per cent of all deaths by 1986 to 1997, according to the report.

"General practitioners (GPs) see 4 children to every one adult with chickenpox, but the ratio of deaths is reversed, with 4 adults to every one child dying from the disease. Adults with chickenpox should see their GP sooner rather than later," Noah said. Deaths were twice as likely amongst men than women, and individuals born outside the United Kingdom (UK) were three times more likely to die than those born within the UK, according to the report.

"Further studies will be needed to reveal whether underlying conditions are responsible for the increased mortality in men," said Noah. "There is some evidence that individuals from tropical and temperate countries have a different experience of chickenpox. Adults from these countries are less likely to be immune to chickenpox, possibly because fewer get the disease during childhood," he added. "Chickenpox is responsible for more deaths than measles, mumps, whooping cough and (Haemophilus influenzae type B) meningitis combined. It is not a mild disease," he said.

*WHO votes for smallpox reprieve*

Source: *New Scientist*

<http://www.newscientist.com/news/news.jsp?id=ns9999180>, 17 January 2002

The 32 nations who govern the World Health Organization have voted to put off destroying the last official stocks of smallpox virus. They have asked the WHO to set a new deadline for destroying the stocks in May, at the assembly of all 191 members of the organisation.

The virus samples were to have been destroyed this year, but in November the United States (US) decided it would keep its stocks to help develop new drugs and vaccines for smallpox. The US was considered unlikely to reverse that decision if WHO members had voted to destroy the virus.

Smallpox was declared eradicated in 1980, following a global vaccination campaign led by the WHO. The only officially remaining virus is in freezers at the Centers for Disease Control and Prevention in Atlanta, and at Vector, the Russian viral research institute at Koltsovo in Siberia.

These stocks were supposed to be destroyed in 1999, making the smallpox virus officially extinct, but the US president at the time, Bill Clinton, persuaded WHO members to postpone destroying them until December this year, so more research could be done on new vaccines and drugs, and on smallpox genes. The reason for the delay was a growing fear of smallpox as a weapon in a world no longer vaccinated for the disease.

*Weaponised stocks*

Not all smallpox may be in official hands. The Soviet Union weaponised 100 tonnes of the virus in the 1980s, and some may have escaped destruction. Jonathan Tucker of the Monterey Institute of International Studies in Washington says Iraq and North Korea are suspected of possessing the virus, partly because they have vaccinated their troops against smallpox.

In 1999, WHO members agreed to a smallpox research plan as part of the agreement to postpone destroying the virus. However, in December 2001, the WHO Secretariat reported that two of its goals for 2002; new anti-smallpox drugs, and an animal model for smallpox, would not be ready in time. It also said live smallpox virus would be needed to test any new drugs or vaccines.

In the wake of the anthrax attacks in the US, the US Department of Defence decided in November that smallpox stocks should not be destroyed before two anti-smallpox drugs, and a new, safer vaccine are licensed, along with new methods for detecting the virus and diagnosing infection.