

## Doctors warn of dangers of the internet

Terri Rutter, *Washington*

Sending emails to medical based sites on the worldwide web may not be the best or the fastest way to get personal medical information, concludes a new study in this week's *JAMA* (the journal of the American Medical Association).

The study was conducted by Gunther Eysenbach, and Thomas Diepgen from the University Hospital Erlangen, who evaluated the possible responses received by people who seek medical advice through email messages to medically oriented websites.

The researchers identified 57 websites that professed some knowledge of medicine, and specifically of dermatology, and

which featured an email address to which people could send mail, presumably of a medical nature. The sites chosen were managed by a university, hospital, or organisation with a commercial interest; one site was managed by a pharmaceutical company.

The two researchers then designed a fictitious patient who had the symptoms of a serious and potentially life threatening dermatological condition. On behalf of this "patient," they then sent an email describing the symptoms and asking for advice. Responses varied.

Only half of the 57 sites that were sent the email message responded; all but three of the respondents claimed to be a doctor. All but two of the respondents advised the patient to see a doctor, and seven gave no other advice. Eighteen respondents gave a proper diagnosis. Responses were returned between 1 and 10 days later.

Noting the 50% response rate and the significant time delay in some instances, the researchers comment that this method of receiving medical information may not be reliable and may waste valuable time, especially in life threatening situations.

They also note that people who communicate with these sites in this way have no guarantee that their communication is actually taking place with a certified doctor; nor is the privacy of their emails assured.

Two other articles in the same issue of *JAMA* also explore the increasing use of electronic mail.

Alissa Spielberg from Harvard Medical School explained that, although email is becoming an increasingly common form of communication, there are disadvantages. Patients' privacy is paramount, and there are still many unresolved legal issues surrounding the use of email to give medical advice, particularly to unknown patients. □

## NHS cash boost has been inflated

John Warden,  
*parliamentary correspondent, BMJ*

The Department of Health has clarified the key figures for NHS spending in England which were announced as part of the government's comprehensive spending review three months ago (25 July, p 231).

The official figures show an increase over a three year period of £17.7bn (\$28.3bn) in England (£21bn for Britain). A memorandum from the Department of Health to the Commons health select committee spells out for the first time how this total was computed.

It states: "The total extra investment in NHS total net expenditure over the three year period is £17.7bn. In 1999-2000 the extra resources are £3074m, in 2000-01, £5908m and in 2001-02, £8672m, in each case compared to NHS total net planned expenditure in 1998-99."

This makes it clear, which was not explained in the July announcement, that the three year total is arrived at by using the 1998-99 expenditure as a baseline. The conventional method, using year on year increases, would make the amount of extra resources each year £3074m, £2834m, and £2764m, a total of £8672m, which is the additional amount in hard cash to which the Treasury is committed rather than the £17.7bn which ministers proclaim. □

## Study finds separate strains of HIV in different body fluids

Scott Gottlieb, *New York*

HIV can mutate into separate strains in a patient's semen and blood, suggesting that the infection may be harder to treat than previously thought and be more likely to be transmitted through sexual intercourse, even in cases where virus levels remain low in the blood, a new study has found.

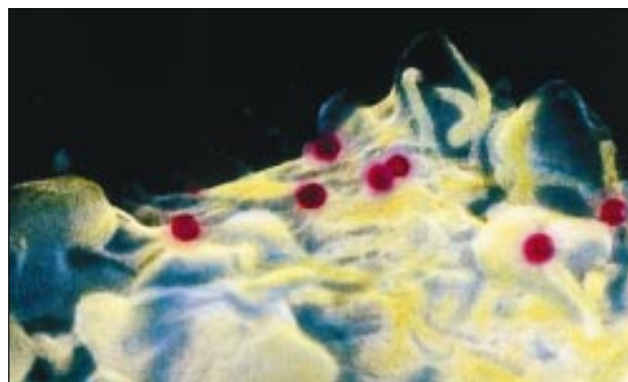
Researchers studied a group of patients infected with HIV, who had proved resistant to drug treatment. They tried them with a wide variety of drugs and discovered that the strains of the virus in the blood and semen were different, so that even when the virus level was lowered in the blood, a strain remained in the semen.

The research, published in the current issue of the journal *AIDS*, involved 11 men infected with HIV in North Carolina and Switzerland who had persistently high levels of HIV RNA in their blood.

Eight of those who were treated before the study had AIDS strains that had mutated and developed resistance to antiviral drugs. In six volunteers with these resistant viruses, their

sperm and blood were found to contain different strains of the virus (*AIDS* 1998;12:F181-9).

While different virus phenotypes had previously been found to exist in the plasma and semen, the current study provides evidence that a strain with a predilection to the genitalia may persist even after the blood virus is treated. The new findings indicate that people whose plasma viral RNA level is low or undetectable may be still capable of transmitting an infectious virus.



Separate strains of HIV can exist in blood and semen in one patient

"Previously, we thought that even if you didn't cure the disease, you were able to lower the virus to such low levels that you could effectively block transmission," said Dr Jeffrey Laurence, director of the laboratory for AIDS virus research at New York Hospital-Cornell University Medical College in New York.

Even though these patients had been treated with protease inhibitors, the drugs did not seem to penetrate the male genitals or did so only with great difficulty. In one patient, resistance to the drug zidovudine was encountered initially in the sperm virus but only later in the blood virus.

The research shows that there are potential reservoirs of virus that can persist even when they are undetectable in the blood. □

### Correction

#### GP cooperatives in Scotland benefit patients and doctors:

This article (17 October, p 1035) stated that an inquiry into Scottish cooperatives had been set up following the deaths of two babies after the local cooperative, Ayrshire Doctors on Call, had provided telephone advice. We failed to make it clear that no blame for the deaths was ever attributed to the cooperative. In one case, the sheriff said that the baby's death was a "predestined tragedy"; in the second the procurator fiscal decided that no fatal accident inquiry should take place.