A paediatrician visits San Francisco

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The University of California, San Francisco (UCSF), is one of the nine campuses of the University of California and is devoted entirely to health sciences. It employs 13,000 people, including 1,500 full-time academic staff, and disposes of an annual budget of $750 million, receiving more than $100 million in federal research grants alone. It has 560 beds but is affiliated to other hospitals, in particular to San Francisco General Hospital, the county hospital serving the poor people of the city (and a major centre for traumatology and AIDS). So cosmopolitan is this community that the notices in the hospital are trilingual—English, Spanish and Chinese—and interpreters can be found for almost any language.

I offer four oversimplified controversial messages about medicine in the United States of relevance to us in Britain.

- Cocaine addiction is producing a generation of damaged children.
- The politics of AIDS threatens to corrupt the standards of clinical research.
- Brilliantly effective though American doctors are, they are becoming deficient in clinical skills.
- Health care costs threaten to ruin the United States economy.

Cocaine

Nothing has yet appeared in the British medical literature about the serious effects of cocaine on the pregnant woman and the unborn child. Cocaine, now freely available in the rapidly absorbable form 'crack', increases intracerebral levels of dopamine and peripheral levels of catecholamine. These cause constriction of the uterine arteries producing hypoxia in the fetus, and tachycardia and hypertension in both the mother and the fetus. Cocaine exposure at critical stages of pregnancy can cause fetal abnormality (in particular renal anomalies and, characteristically, prune belly syndrome), spontaneous abortion, abruption of the placenta, premature labour and all the problems of prematurity, intrauterine growth retardation, decreased head circumference, perinatal cerebral infarction, tremor and irritability in the newborn (although not as marked as in the narcotic withdrawal syndrome), and impaired bonding. These babies are prone to cot death and tend to be restless and discontented infants; although gross motor development is usually normal, viso-motor incoordination becomes increasingly apparent as they get older. They are more likely to become infected with HIV and to return to poor homes; cocaine addiction leads to violence and the children are more likely to be battered. Many tend to be fostered but fostering services in the region of San Francisco are saturated and most children in foster care continue to be deprived. The problem is common among the Black and Hispanic communities. Approaching 20% of babies delivered at San Francisco General Hospital are known to be born to mothers who take cocaine, and some 20% of the babies in the intensive care nursery at UCSF are there because of cocaine. Similar figures apply at inner city hospitals throughout the United States.

Nobody to whom I spoke had any doubt that this is a serious problem, even a catastrophe. It may not happen here but we cannot be complacent. We should follow the example of the United States and conduct nationwide anonymous urinary cocaine screening at antenatal clinics, so that any problem could be anticipated and action taken. Would it be too much to hope that an effective drug treatment programme could then be set up?

HIV

No visitor to San Francisco can be blind to the problem of HIV. Lasting impressions for me were the sight of two obviously sick young men trudging, heads bowed, hand in hand along Market Street, the transvestite, mouth bedawbed with lipstick, unsystematically doing his shopping, and the smart charity concert disrupted by 'gay rights' activists. There is a steady trickle of HIV infected patients through the childrens' ward at UCSF, the virus having been acquired through blood transfusion, factor VII concentrate, or at birth from an infected mother. These patients are no longer out of the ordinary; they may be tragic, with anaemia, weight loss, cryptosporidium diarrhea, lymphocytic interstitial pneumonia and many other complications, but not to be isolated, shunned and never mentioned. As the century draws to a close, an increasing proportion of new AIDS cases will be infants who have inherited the virus from their mothers. It will impinge on doctors everywhere. Shortly after I returned to the UK my first case of AIDS was referred to me.

Why do I state that the politics of AIDS threatens standards of clinical research? In San Francisco the
homosexual activists form a vociferous pressure group. Naturally, if one has a wasting, miserable, fatal illness, one is desperate for any treatment that has the remotest possibility of succeeding. Nobody would really want to be part of a double blind trial, for fear of not receiving the treatment. The doctors who run clinical trials are depicted as uncaring empire builders, serving science and not humanity, and suffer bitter criticism on television and in the press. Homosexuals openly boast of pooling their drugs after clinics, so that the placebo is mixed up and everybody gets some of the treatment. Federal agencies released the results of research into the prophylactic use of AZT to the lay press before the report to the scientific community. If indeed AZT administered to the asymptomatic patient does delay the onset of AIDS, the cost of treatment will amount to billions of dollars for the federal government. The evidence of efficacy will therefore have to be unequivocal, and no short cuts in research are permissible.

In the United States there is widespread anonymous screening of the newborn for HIV antibody using blood samples from screening for phenylketonuria. The baby's background can be inferred from the ZIP code. It is to be hoped that in Britain similar programmes, which have already started, will become more widespread as AIDS in children becomes more prevalent.

**Clinical skills**

Neonatal intensive care is the type of specialty at which the American trained doctor is particularly adept, requiring a thorough grasp of respiratory physiology and a dependence on high technology. The interns are expected to deliver at high speed a mass of bewildering technical detail on each baby, couched in confusing technical jargon. Resuscitation of the newborn is an impressively smooth operation; at birth the baby is set upon by three or four doctors, three nurses and a technician, and within 10 minutes the endotracheal tube and the arterial catheter are in place, the intravenous infusion is running, the heart rate, blood pressure and arterial oxygen saturation are being monitored and the first blood gas and haematocrit results are ready.

Such a dramatic, decisive approach is not always suited to the 'real world' of the inner city hospital. I saw a baby born with meconium aspiration at the General Hospital. Quite rightly he was intubated and suctioned out. To me it seemed obvious that he would have quickly settled, but in next to no time the poor mite was being attacked from all sides, his chest thumped, his throat sucked out, drips put up, arterial samples sought, with umbilical artery catheterisation, lumbar puncture, antibiotics, hourly blood gases, and so on. Three days later that baby was still on a drip. I was there when the Mexican mother was asking through an interpreter what was wrong with him, and was glad that I did not have to give an answer.

Another set-up which puts British practice to shame, at least in Cumbria, is the service for children investigated for sexual abuse at San Francisco General Hospital. The service, CASARC (Child and Adolescent Sexual Abuse Reference Center), is organised by the city. Between 30 and 60 cases are received every month and each child is examined by one of two paediatricians who specialise in ambulatory paediatrics, assisted by a specially trained nurse. Examination is very tactfully and gently carried out, with the nurse talking to the child so that the child hardly notices what is going on. The examination is performed on a special couch with the aid of a colposcope which both magnifies and lights up the genital area, and photographs are taken. This enables all paediatricians in northern California with an interest in child abuse to meet regularly and pool information and share experiences. This is important because the normal appearances of the anogenital region in childhood are not yet well defined. I picked up some useful hints. For instance, if the hymen gapes and seems to be deficient posteriorly, the child should be examined kneeling forward in the knee elbow position which will enable the posterior margin to fall forward like a thin membranous curtain, opening out damage in a normal hymen. Reflex anal dilatation, in the absence of other signs, is virtually useless as evidence of childhood sexual abuse.

With such a wealth of expertise, why accuse American doctors of being poor clinicians? After all, they are of high calibre, and the medical students are particularly impressive. They enter medical school having already graduated in some other subject, and are thus both more mature and keener than their British counterparts. They are impressively knowledgeable and hard working, and the teaching activities are myriad with many interesting cases to see.

One has the distinct impression that bedside skills in the United States are not properly practised. As often as not, ward rounds do not take place at the bedside but in conference rooms. Patients are thoroughly discussed but seldom actually seen. One example was the case of a 6-week-old boy with projectile vomiting who was presented at morning report as an example for discussion of the differential diagnosis of vomiting in the newborn. One offering was chronic granulomatous disease causing infection of the pylorus! The resident who presented the case said that he had thought that he could feel the 'olive' (or pyloric tumour) but had not examined the baby during a feed. The decision was made to go on to ultrasound examination and, if that did not show evidence of pyloric stenosis, to proceed to barium studies. Nobody suggested that the opportunity be taken to demonstrate visible gastric peristalsis, the techniques of test feeding and the palpation of the pyloric tumour. Admittedly there were features in this case that made the doctors want to be extra careful, but at any peripheral hospital in the United Kingdom this baby's pyloric stenosis would have been diagnosed by the use of fingertips and eyeballs and operated upon on the day of admission.

Another example was the child admitted with fever, conjunctivitis and a skin rash. It was felt that Kawasaki
disease could not be ruled out and the child was treated with intravenous gammaglobulin, costing thousands of dollars. Serology tests eventually gave the diagnosis—measles.

This neglect of clinical skills is a worrying feature in the training of young doctors in the United States. It is not something we can be complacent about in Britain, and I am sure it worries the American medical establishment. There are many reasons for it. The huge numbers of interns, residents and students perhaps make individual bedside teaching impracticable. It is felt that imaging techniques can replace intuition or guesswork on which clinical diagnosis depends. There is the fear of litigation if each case is not investigated to the full. Of course, with a healthy population there are fewer physical signs to demonstrate. Many medical students go to the Third World during their elective period to be taught physical signs.

Health care costs

In California one is immediately struck by how lavishly hospitals are equipped. A pulsoximeter is at almost every bed. Every community hospital has at least one CAT scanner. A child with post-anoxic encephalopathy following diabetic ketoacidosis had weekly NMR scans. Californians would be appalled at the low level of equipment at an average NHS district hospital, and equally dismayed by waiting lists, outpatient queues, bed shortages and the difficulty in seeing a specialist. But they have an extremely costly system which in the past led such industrial giants as the Chrysler Corporation close to bankruptcy when the unions were demanding extravagant health care insurance. The rules of free enterprise are turned on their head when it comes to health care. Competition amongst doctors and hospitals paradoxically leads to overprovision and inflation; patients want the best, not the cheapest.

In addition, California is developing alarming social problems. There are the usual inner city problems of poverty, broken families, violence and drug addiction, and the burgeoning cost of HIV. If all affected people are to receive prophylactic AZT and pentamidine, it will cost billions of dollars nationwide. In addition, the economy of California, which produces most of the food in the United States, itself the bread basket of the world, depends upon large numbers of migrant farm workers, many of them illegal immigrants from Mexico. There are also many immigrants from throughout the Pacific basin, as well as from other parts of the United States. Real income for families of parents aged less than 30 has fallen 26% since 1973, and the number of poor children has nearly doubled in 20 years. More than 23% of children in California live below the poverty line, and it is estimated that by the year 2000 the population under 18 years old will increase by 25% while the number of Californians aged over 85 will increase by 81%.

The needy are covered by welfare provision and the medical care offered to them is costly. There are no inner city GPs, no system of health visiting and no set of basic medical records such as a British GP holds on every one of his patients. Therefore the system of primary health care cannot be inefficient.

Medical care is basically financed in three different ways. There are the old traditional private insurance firms such as Blue Cross, Blue Shield and Mass Mutual. Then there are the health maintenance organisations (HMO), such as Kaiser or Health Net, which employ their own doctors and run their own hospitals available to people or organisations that subscribe to them. Finally, the uninsured may be able to fall back on federal schemes such as Medicare for the elderly, or MediCal for the poor people of California.

In the past, doctors could set their own fees and this led to inflation. Now costs are carefully scrutinised by government, insurance companies, HMOs and hospitals. For instance, at Marin County Hospital every patient’s record is scrutinised daily by a team of doctors and nurses, and any unnecessary procedures, delays or inappropriate treatments are queried. (This type of audit might not come amiss in the UK for both cost control and quality assurance.) Insurance companies require a second opinion before a surgeon can carry out an elective operation. Norms are being established for length of hospital stay and costs for various diagnostic related groups (DRG). Any hospital that receives federal funds is inspected regularly by the Joint Commission of Accreditation of Hospitals. The work patterns of doctors who work for health maintenance organisations are closely scrutinised. One doctor told me that his car was automatically clocked in and out of the hospital car park; he preferred to park in the street.

Despite all this, it seems that costs are not being contained and that obfuscating bureaucracy thrives. California has a high rate of state income tax because of the cost of medical care. Dr Phillip Lee, Professor of Social Medicine, who is also an important adviser to the United States government, is in no doubt of the folly of undermining the British National Health Service which is cheap and should be regarded by the government as a weapon against inflation.

However, Americans are not pessimists by nature. Eventually problems are tackled with enthusiasm and resources. Can we say the same?

Dr Roullatt was awarded a Gilliland Travelling Fellowship of the Royal College of Physicians to enable him to visit San Francisco.