Letter from . . . Chicago

Neither fish nor fowl

GEORGE DUNEA

When Abraham Flexner published his famous report indicting the medical schools of his time some 70 years ago, he set the stage for the development of large academic medical departments staffed by full-time faculty members, whose clinical duties were limited to allow a full dedication to scholarship and science. For the greater part of this century the academic physicians taught and carried out research; and if the financial rewards were at first slim it was understood that sacrifices were needed and that science had its own rewards; but after the second world war came a period of unprecedent government support for science, so that "Fifty years after Flexner"[1] the full-time academic model had reached the acme of its development. In the late 'sixties, however, the economic situation began to change and money threatened to run out, forcing the professors to look for alternative ways of support to keep their departments going.[2] Thus arose the *faculty practice plans*, incorporating the academic doctors into a variety of group practices,[3] billing Medicare and Medicaid and insurance carriers for services rendered by staff directly or by supervising residents, and thus supplementing the inadequate amounts of money offered by universities and local governments.

Yet such faculty plans are not panaceas[2]; and there are some who deplore the passing of the full-time academic model, taking issue with the idea of faculty members busily practising medicine to earn money for the medical schools, fearing that in the long run this will jeopardise the quality of both teaching and research.[4] The professors of medicine, being closest to the budgetary realities, may well decide that they have no other choice[2]—though perhaps tending to agree that, "outstanding teaching and training of physicians can be done only with strictly full-time clinical faculty dedicated to scholarship, teaching and research —a faculty willing to accept a financial sacrifice in exchange for opportunities to study, think, teach, and do research. . . ."[4] But younger faculty members, looking with envy at the incomes of their colleagues in private practice, may decide that they will become neither rich nor famous, and may thus feel that they are getting the worst of both worlds, being neither fish nor fowl, enjoying neither independence nor security, but always remaining at the mercy of the next occupant of the professorial chair. Not that the system does not offer many advantages. It provides freedom from the stresses of truly private practices, as well as the opportunity to teach, carry out some research, and enjoy reasonable working hours with few night calls or weekend disturbances. Some cynics, indeed, have questioned whether faculty practice plans bear any resemblance to real private practice; and they contrast the harassed practitioner with the academic "clinician," who still enjoys considerable "protected faculty time," though periodically signing his intern's notes or descending on the wards at the head of a well-drilled phallanx to lay hands ceremonially on a patient or to torture a hapless student crossing his path. There has also been considerable discussion about reimbursement to medical school doctors and about what constitutes genuine services rendered as distinct from supervision of house staff. Some of these issues remain unsettled; but while the future of faculty practice plans is uncertain, they remain perhaps the only viable solution for the medical schools wishing to retain control over doctors working in the hospitals.

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Plague and pregnancy

For the doctors practising outside large medical centres, however, the problem is often one of isolation; and every intern soon learns that the local medical practitioner is an obsolescent medical dinosaur, to be treated with condescension or benign neglect. This attitude seemingly prevails even in the progressive south-west, where a healthy looking young man came to the hospital because of fever and cough. At night the nurse noticed that the patient was restless and asked the resident who happened to be passing by to look at him. The resident noticed dyspnoea and enlarged axillary lymph nodes, and transferred the patient to intensive care, where he promptly had a cardiac arrest. The resident attempted resuscitation, but the patient vomited in his face and died. The next morning a necropsy found that the cause of death was bubonic plague. Apparently the resident has been taking prophylactic tetracycline ever since that episode. But more surprising was the discovery in the patient's chart of a crumpled referral slip on which the old local medical practitioner had written R/O (rule out) plague.

We note then, chiefly for the benefit of young local medical practitioners, that, whereas in the first quarter of this century bubonic plague occurred chiefly as urban domestic rat-associated epidemics, it is now exclusively sylvatic, endemic chiefly in the south-west, and transmitted from wild animals by fleas. There is a huge reservoir of *Yersinia* (*Pasteurella*) *pestis* in prairie dogs, rabbits, coyotes, and bobcats, and the disease occasionally spills over to man, affecting chiefly outdoor campers or Indians on reservations. Some 10 to 20 cases are reported each year, usually from May to September; the bubonic form is most frequent, but septicaemia and skin infections may occur. The diagnosis is made by isolating the organism and occasionally by serology, and the reported mortality is 14%.[5]

More epidemic, and also predominantly urban, is teen-age pregnancy, with serious consequences for both mothers and infants. Over 1·1 million teenagers become pregnant each year, mostly with unwanted babies, reflecting a sexual revolution that

has resulted in four out of five boys and two out of three girls being sexually active by the age of 19, and often much earlier, so that it is the exceptional youngster who has not had sexual relations while still a teenager. In 1978 over half a million babies were born to teenage mothers, more than half of whom were not married, and many of whom were between 15 and 17 years old; and another 434 000 pregnancies ended in abortions. Four out of ten girls now become pregnant before they reach the age of 20, and two in ten have babies. Also reflecting the changing morality is the finding that 96% of mothers keep their babies instead of placing them for adoption; and more than 1·3 million children, at least half of whom have no legal father, now live with teenage mothers. But the social and economic consequences are enormous, for most of these teenage mothers are supported by public funds, many live in poverty, and at least 60% have not even finished school. For the infant the consequences are equally serious. Children of teenage mothers are said to have lower IQ and achievement scores in school than other children; and it is primarily this high incidence of teenage pregnancies and illegitimate births, combined with the failure of these mothers to seek prenatal care, that leads to the high infant mortality rates reported in some cities. At present the average national infant mortality rate is 13·8 per 1000 live births, but in Chicago it averages 21·3 (15·6 for whites, 26·6 for non-whites, and 30 to 40 in certain black and Latino neighbourhoods). Prospective mothers often fail to attend prenatal hospitals because of fear, ignorance, or poverty; and, while the health department is trying to remedy the problem by regionalising maternity units, the real solution should come from dealing with the pandemic of unwanted illegitimate teenage pregnancies, better nutrition for mothers and babies, educating the prospective mothers to seek prenatal care, and breaking the cycle of ignorance, poverty, and violence that all too often characterises life in the inner city. And it was this senseless violence that last winter led to the death of Dr Michael Halberstam, tragically shot to death last winter by burglars trying to enter his home.

Premature ventricular contractions

A noted cardiologist and writer, Dr Halberstam was recently described as striding the editorial lists like a "paladin spoiling for a fight, shattering lances with the federal bureaucracy, academic pomposity, political hypocrisy, technological pseudo-sophistication, and with anything else that smelled like hog-wash."[6] Many will remember him best for his fine work as chief editor of *Modern Medicine*. Perhaps most memorable are his strictures against doctors who pursue the premature ventricular contraction with the same zeal as Chairman Mao's Chinese had tried to stamp out flies, rats, and mice, but in the process had also wiped out the sparrows and songbirds. So that, whereas physicians in intensive care units hate the premature ventricular contraction like the plague, we stand reminded that even the healthiest of people may have moments of prematurity, that nobody knows how vigorously premature ventricular contractions should be suppressed, and that while lignocaine prevents arrhythmias it may not necessarily lower mortality.[7]

Yet illustrating the dangers of the premature ventricular contraction was the young telephonist admitted to my service for further observation after three days in the intensive care unit because of severe chest pain. Wondering why such a young woman should have heart disease, I began to ask about radiation down the arms, relation to exercise, and impending feelings of dissolution, when, smiling sweetly, she said she might as well come clean, and that she merely wanted to find out why she could not have any babies. "But someone told me that you would not have to wait so long at the County Hospital if you said you had pain in the chest." Unfortunately, she impressed the intern not only by the sincerity of her manner but also by her multiple innocent premature ventricular contractions, which lead to three days' confinement and monitoring in the intensive care unit.

Brown and black lungs

From the heart we now turn to the lung, and to reports of a rising incidence of drug-resistant tubercle bacilli, especially among Vietnamese immigrants. In one area some 60% of organisms were resistant to one drug, and 20% to three or more, thus re-emphasising the necessity to begin treatment with at least two powerful drugs as well as obtaining sensitivities. In the south, meanwhile, brown lung disease (byssinosis) remains a problem, especially in Virginia, where it affects some 10% of the State's 1300 cotton-mill workers. Those affected have difficulties in obtaining compensation because their chest radiograph may be normal; the State has imposed a five years' statute of limitation on claims; and the textile manufacturers often question the diagnosis, arguing that their asthma or chronic bronchitis results from smoking. For black lung (pneumoconiosis), however, the benefits have become so liberal that almost anyone who has worked in the coal mines for a long period may obtain an automatic pension. Indeed, a study by the General Accounting Office has found that 88% of claimants approved for benefits were neither disabled nor able to produce a medical certificate. Faced with a $1 billion deficit in the black lung programme, the administration recently tried to save $378m by tightening benefits and by increasing the coal tax, thereby shifting the burden from the taxpayers to those who produce or consume coal. These proposals so enraged the miners that 177 000 walked off their job in protest, and 6000 marched on the White House chanting "black lung kills." "I wish I could give my black lung to Ronald Reagan," said one miner—but the press agreed that benefits should be limited to the truly disabled.

On the issue of tobacco subsidies, however, this Government, as others before it, is treading more gingerly, even at the cost of appearing inconsistent. The reason for this is that "the tobacco lobby has completely sewn up Congress," and that all types of deals have been struck, so that no congressman would dare vote against tobacco for fear of jeopardising his own pet projects. Currently the Federal Government subsidises the tobacco growers by storing their crops in a Federal silo and giving them a low interest loan if the market price falls below a certain level. Although the loans are eventually repaid, the total cost of the programme is some $80m a year—while at the same time the Government also spends $12·5m on its antismoking campaign; and it accounts for this seeming inconsistency by explaining that tobacco subsidies encourage farmers to grow less and keep the price high, thus in effect discouraging smoking. Yet not only are the medical costs of smoking-induced illness rising, but recent reports of increased lung cancer in non-smoking spouses of smokers have led to the suggestion that one may be killing two for the price of one. Of course, further expenses may be anticipated if lung transplantation, recently performed at Stamford on a 45-year-old woman with pulmonary hypertension, should achieve wider use.

Snore and you sleep alone

On the less deadly (but not innocuous) problem of influenza, we read that this winter most States had outbreaks of A-Bangkok, a mutant of the Hong Kong variety, or of A-Brazil, a less serious Russian flu strain. The peak of the epidemic occurred in January, when the reported death rate from influenza and pneumonia reached a thousand a week. Meanwhile there has been some disenchantment with vaccination and, indeed, Dr Sabin, co-developer of the oral polio vaccine, recently said there was no justification in giving flu vaccine to anyone, because it neither protected against the illness nor reduced the mortality. Besides, flu epidemics offer certain advantages, recently described in the *Wall Street Journal*, such as increased business for temporary employment offices and, also, a 15% increase in sales for cough and cold remedies—this despite a recent newsletter from the health department (typically entitled "Dear health professional") explaining that cough remedies

(along with a long list of almost every other drug doctors use to reduce their patients' symptoms) are of unproved value and by law may have to be withdrawn from the market. But for sufferers of upper respiratory disease caused by vibrations of the soft palate, tongue, and muscles of the mouth, a 90% cure has been claimed from an $80 plastic collar that sends mild electrical impulses into the neck each time the vibrations occur. The alternative, we are told, is no less unpleasant, for, as the saying goes, "Laugh and world laughs with you; snore and you sleep alone."

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MATERIA NON MEDICA

The Brahms-Billroth friendship

Only his involvement with Clara Schumann exceeded the impact on Johannes Brahms of the 30-year friendship with Theodor Billroth. The insistence of his mother forestalled the surgeon from a career in music, but his enthusiasm never waned. For the excellence of his judgment Brahms submitted his compositions to Billroth before public performance, and the abundant hospitality of Billroth's home afforded initial hearings. An English edition of the considerable correspondence by Hans Barkin appeared in 1957. Billroth's letters are long and eloquent: "A pen transforms me marvellously," whereas the reluctant Brahms wrote in a telegraphic, enigmatic manner.

Quarrels disrupted Brahms' existence. His rudeness, brusque insensitivity, and malicious hurting invite comparison with Beethoven. On one celebrated occasion he departed from a group with a plea for pardon from anyone he had failed to insult. Yet while maintaining personal privacy and avoiding intimacy, the society of musical friends was an essential whereby he could expound his views and experience the conflict of opinions. Only Billroth escaped his rancour, for his personal and intellectual prowess could face Brahms on equal terms.

The massive figure of Billroth, his face framed in a blonde beard, and the short, paunchy, muscular Brahms were readily recognisable. Brahms paraded his uncouthness, a man of the people who, even when famous, dwelt in a modest habitation, ate in cheap restaurants, and dressed abominably—his worn brown coat upgraded to an ancient monument for the amused Viennese.

Certain circumstances conspired to cool the friendship in its later years. Brahms remained in full vigour, free of disease until his end, and was imbued with a repugnance of disease in others, with whom he would then sever relationships. Following incomplete recovery from pneumonia in 1887 Billroth's obesity increased, his cardiac state worsened, and a melancholy mood prevailed. For Brahms "the sick giant was no longer to his liking." Under a photograph of Brahms Billroth had placed a line from the original manuscript, an act of mutilation that horrified the composer. Eduard Hanslick, the music critic, passed some of Billroth's letters to Brahms, recollecting too late that they contained critical remarks of Brahms' behaviour. Billroth's praise of Massanet also gave offence; Brahms was contemptuous of the Frenchman's music.

After Billroth's death in 1894 Brahms expressed his gratification of the friendship—a gift of fortune. He was to follow him three years later; jaundiced and emaciated he was spared realisation and he had enjoined his doctor never to communicate anything of an unpleasant nature.—J SHAFAR (retired physician, Burnley).

Crossing the desert

In Saudi Arabia tourism is unknown and there are still remote areas where a journey can become an exploration. During a recent stay we made several expeditions, one of which involved crossing the western end of the Empty Quarter. At the last petrol station before the desert crossing we filled the tanks and spare cans of our three four-wheel-drive vehicles; the next petrol would be at the oasis of Najran, 300 km away. The attendant gave us instructions: "The first 20 km are surfaced road; after that head south across the desert. Najran is to your right, with a road for the last 50 km." With this information, a compass and a 1955 aerial survey map, the only one available, the 12 of us set off. The road ended and we were in the desert, which here was of gravel and scrub. We were able to follow the tracks of others who had gone before us, but the rough going soon began to take its toll of our equipment. Petrol and water cans leaked, bottles and crockery smashed, and food turned to mush. Soon, our progress was marked by rubbish discarded every few kilometres.

By late afternoon the tracks had petered out and it was evident that our direction was wrong. Then suddenly we lost the firm ground and found ourselves up to the axles in soft sand. With spades, canvas tracks, and hard pushing we managed to manoeuvre our vehicle back on to firm ground. By this time darkness had fallen and we found to our dismay that, although we had only been about 200 m apart, the other cars were out of sight and earshot. We spent a long anxious time shouting and walking about with torches before locating the others and reassembling on hard ground. We were lost and exhausted so we decided to stop for the night where we were. After a few drinks and a meal we were able to view our predicament in a more sanguine light. As we climbed into our sleeping bags our interpreter, Mohammed, told us he would pray all night for our safe deliverance.

Next morning our spirits were high as we got up in the cold desert dawn. Packing the cars after breakfast we suddenly saw two pick-up trucks far away to the east. We chased after them at high speed to find the drivers were Saudis travelling to Najran, and would be willing to guide us. Mohammed's prayers had been answered. We drove in convoy behind them and learnt that fast driving is essential for riding over the sand dunes. Some of the apparently vertical slopes they took us up were terrifying, but we approached at full throttle and sailed to the top. Occasionally on a crest they would stop, climb on the cab roof and scan the horizon. This rather sapped our confidence in them as guides. However, after some hours we stopped again on top of a large dune. Imagine our excitement at finding the road unmistakeable in the distance. Many thanks, congratulations, and hand shakes were bestowed on our Saudi guides. As we headed towards the oasis I felt, not a Lawrence or a Thesiger perhaps, but a little of their sense of achievement.—ANN SAVAGE (Westbury-on-Trym, Bristol).

What paternity tests are used now, and how reliable are they?

The usual range of genetic polymorphisms applied to problems of doubtful paternity include about six red cell antigen systems (ABO, MNSs, Rh, Fy, JK, K), serum protein systems (haptoglobin, Gc, Gm, Km), various red cell enzymes—for instance, red cell acid phosphatase (EAP)—phosphoglucomutase (PGM), and, more recently, the addition of at least the products of the A and B loci of HLA. Together, this range produces about a 95% chance of excluding from paternity a wrongly named man—that is, out of 100 cases in which the putative father is not the biological father, 95 would be excluded on the blood-group findings. Absolute proof of paternity (as opposed to non-paternity) is not possible, but if the putative father survives as a possible father after testing for so many polymorphisms, it is likely that a valuable figure for the probability of the putative father's paternity can be provided. In experienced hands, the results are exceedingly reliable. All investigations directed by a court and most others are carried out by a small panel of testers appointed by the Secretary of State to the Home Office. The testers are first approved by a panel of blood-group experts. An up-to-date account of this subject was given in a recent address to the British Academy of Forensic Sciences.[1]

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