Riding horses used to be a difficult skill. Saddles had been in use for about 400 years, but they were simple, there were no stirrups, and to stay on you depended on the strength of your thighs. If you were really expert you could use a bow. You could use a light lance, held with a bent arm, but any attempt to impale an opponent would pitch you over the tail of your own horse. Somewhere, probably in China, a foot board was attached to the saddle that made riding easier, and the barefooted riders of hot countries used a simple loop into which they could stick their big toe. During the seventh century wooden stirrups appeared, and in 694 the Islamic general al-Muhallab noted that these broke easily and ordered that they be made of iron. This is the first reliable date in the whole sequence.

Foot soldiers versus armed riders with stirrups

Iron stirrups properly secured to saddle made it possible for the horseman to wield a sword without falling off and led to the development of the longsword. The horseman could carry a heavier lance, which soon developed into the mediaeval spear, held firmly so that on its point could be delivered the whole impetus of horse and rider. No footman could stand against the armed rider with stirrups, and by 730 the writing was on the wall for those who still depended on the mass levy of foot soldiers.

But heavy horses, weapons, remounts, and armour were expensive. No one could buy these and at the same time maintain himself in food. Charles Martel and his successors were benefactors to the popes and managed to charge the church lands with the duty of supplying these increasingly heavy cavalry. They did this by relieving the soldier of the task of feeding himself and family by living on the surplus value of several peasant families. So the manorial system was established in which the manor was large enough to provide horse and remounts, horse furniture, spears, swords, and a servant to keep these in proper order, thus enabling the soldier to spend his peaceful days in military exercises. The

three field system produced enough oats for his horses. There is some evidence that the children of such soldiers preferred to follow the military occupations, and it has been suggested that one of the crusades was encouraged to rid western Europe of these quarrelsome and troublesome landless knights.

But horse breeding for military horses produced heavy horses unsuitable for war or too many for use as war horses. Mares and geldings were useful for farm work, and by 890 Alfred was expressing surprise that horses were used for ploughing in Norway. So the task of the ploughman was lightened and within a few centuries the outlying homestead was deserted and peasants crowded into the village where they could find blacksmith, priest, fellowship, news, and a greater choice of girls and sons in law.

The last invention seems to have been the iron horseshoe; hoofs are sensitive when wet, and the iron horseshoe saved the hoof on rough soils and difficult journeys. They first appeared about 900 and by 970 were usual for all long journeys.

So by 1000 all the technical skills needed for the application of horse power to human needs were available, the essentials of the feudal economy were in place, and "Man had been a part of nature; now he became her exploiter."

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Haywards Heath, West Sussex RH16 1HH

GEORGE DISCOMBE, MD, FRCPATH, retired consultant pathologist

Correspondence to: Highwood, 10 Paddockhall Road, Haywards Heath, West Sussex RH16 1HH.

Research and the general practitioner

CHRISTOPHER C BOOTH

"Know then thyself, presume not God to scan,
The proper study of Mankind is Man."

Pope

The Provincial Medical and Surgical Association, the parent body of the present British Medical Association, was founded in 1832. It is significant that the BMA owes its origins not to city practitioners in London but to a group of provincial doctors who believed that the provincial practitioner had as much to offer in the study of disease as his counterpart in the metropolis. The foundation year was only nine years after the death of Edward Jenner, so that the founders had before them the shining example of a unique scientific achievement made by a country practitioner working in the hills and valleys of his native Gloucestershire.

There were during the nineteenth century in England other country practitioners whose discoveries were to make a major contribution to the advance of medical knowledge. William Budd, working as a country doctor in his native village of North Tawton in Devonshire in the 1830s, established that typhoid fever was a communicable disease and that it was due to an infectious agent that could be transmitted by contaminated water from one patient to another.¹ In 1841 he moved to practise in Bristol and became an active member of the fledgling Provincial Medical and Surgical Association. There in 1866, following in the steps of John Snow, he

showed how a cholera epidemic in the city could be controlled by hygienic measures. William Budd pointed to the particular advantages enjoyed by the country practitioner in studying the transmission of infectious disease.² In his classic work on typhoid, carried out when at North Tawton, he wrote: "Having been born and brought up in the village I was personally acquainted with every inhabitant of it and being, as a medical practitioner, in almost exclusive possession of the field, nearly everyone who fell ill, came immediately under my care. For tracing the part of personal intercourse in the propagation of disease, better outlook could not possibly be had."

MacKenzie and cardiology

Perhaps the most outstanding example of research in general practice during the nineteenth century is provided by the career of Sir James MacKenzie.³ MacKenzie was born at Pickstonhill Farm in a village near Perth in Scotland in 1853. He did not excel at school, and his mother was told by one of his teachers: "Mrs MacKenzie, your James is the most stupid boy in the school." This was the lad who was to graduate in medicine at the University of Edinburgh in 1878, become a fellow of the Royal Society, and found the science of cardiology in Britain. In 1879, modestly having no

Dr William Budd, MD, FRS (1811-1880).

great confidence in his own abilities, MacKenzie went into general practice in Burnley in Lancashire, a sooty, smoke laden mill town with rows of those interminable back to back houses that were so much a feature of the industrial revolution in the north of England. There MacKenzie invented the clinical polygraph, with which he was able to record the pulsations of the jugular veins in patients with heart disease and in particular to demonstrate the nature of what we now call atrial fibrillation.

Much of MacKenzie's work was done in his patients' homes during the course of a busy day's round, and he wrote at night into the small hours. His first cardiological papers were published in 1891 and 1892. Within 15 years he had established a remarkable international reputation, corresponding with physiologists at Cambridge and with Wenckebach in Groningen, and later collaborating on the pathology of heart disease with Sir Arthur Keith. His fame also brought admirers as distinguished as Sir William Osler to visit him at his surgery in Bank House Street. He did not stay in Burnley, for in 1907 he moved to London, where he established a successful cardiological consultant practice and where his pupils included (Sir) Thomas Lewis.

MacKenzie was associated in an unusual way with the country practitioner who was to become the first president of the Royal College of General Practitioners in Britain when it was founded in 1952.⁴ While practising in Burnley MacKenzie took care of the family of a wealthy mill owner, Mr Harry Tunstill, who in 1909 built a large country retreat for himself and his family at a village called Thornton Rust in the lovely valley of Wensleydale in Yorkshire. He had one son and six daughters and the youngest but one was Gertie, who had been delivered by MacKenzie. In 1913 Gertie met the new young doctor, Dr William Pickles, then 28 years old, who a year before had joined the practice in Aysgarth, two miles down the valley. Like MacKenzie, Pickles had not always been the most successful of students. Although he finally graduated in 1909, he had failed both parts of the London MB when he sat for it in 1908 and was ploughed in clinical surgery when he first attempted to gain the licence of the Society of Apothecaries.⁵

At Thornton Lodge the young doctor enjoyed the company of a family that employed four housemaids, two pantry maids, a cook, four gardeners, a coachman, and several grooms. There were tennis

parties and dances in those halcyon days that preceded the first world war before the lights went out all over Europe. Pickles went away as a naval reservist during the war years, but in 1917 he was canny enough to return to Aysgarth to secure the girl whose birth had been supervised by James MacKenzie, and whom he married in Aysgarth Church on the 5 May.

MacKenzie was to have an important influence on Pickles's career. It was in 1926, at the age of 40, that Pickles first read MacKenzie's book *The Principles of Diagnosis and Treatment in Heart Affections*.⁶ MacKenzie had argued cogently in that book that: "Whole fields essential to the progress of medicine will remain unexplored, until the general practitioner takes his place as an investigator." Stimulated by this book, Pickles took refresher courses in medicine in London and Edinburgh in 1927 and 1929. He was also, apart from being a busy general practitioner, part time deputy medical officer of health for his local district and for this reason had always been interested, with his then partner Dr Dean Dunbar, in the transmission of infectious disease in his local community. They had both been impressed by two successive epidemics of jaundice in the practice, and Pickles was particularly concerned to develop a system to record these epidemics that would replace the haphazard methods of routine practice.

Epidemiology of hepatitis

With the advice of Dr Alison Glover of the Board of Education and medical officer of the then Ministry of Health, Pickles developed a deceptively simple but effective method of recording the infectious diseases that he encountered. Wensleydale then, as now, contained several ancient villages or small towns, built in the grey limestone of those Pennine valleys. Half a century ago, when communication was limited, electricity rarely existed, and families were more self contained and isolated than today, the dales people would meet with others from neighbouring villages only on special occasions—market days, funerals, weddings, or at annual shows, feasts, and the like. With the aid first of his daughter and later of Gertie, his wife, Pickles entered all the patients with infectious disease encountered in his daily rounds on charts that recorded on the ordinate the villages in their natural social grouping and on the abscissa the dates on which each illness occurred. In this way, and by knowing from his patients who had met whom and when, he could trace the progression of any infection in the practice and also determine its source. He studied influenza, measles, Sonne dysentery, varicella, herpes zoster, and any other infectious disease that came his way. But it was his studies of infectious hepatitis, then known as epidemic catarrhal jaundice, that were scientifically the most interesting. At that time there was considerable controversy over whether the condition was an infectious disease at all. No incubation period had been clearly established, though workers

Dr William Pickles and his wife, Gertie.

suspected that if there were an incubation period it might be prolonged. By the use of his charts and studies of individual epidemics within families and villages Pickles was able to show that the incubation period of the disease varied between 26 and 35 days.⁷ His studies were an important contribution to establishing the infectious nature of that condition.

Pickles described his work in a series of papers in the *BMJ*, *Lancet*, and elsewhere during the 1930s, and in 1939 he published his classic work *Epidemiology in Country Practice*, a beautifully written book of little over 100 pages that should be commended to all who work in general practice or who seek to do so.⁸ The preface to the work was by Major Greenwood, first professor of epidemiology at the London School of Hygiene and Tropical Medicine, the most distinguished epidemiologist of his day and the predecessor of Sir Austin Bradford Hill. In it Greenwood wrote: "Just as tropical epidemiology received its greatest stimulus from Manson the 'doctor,' so will epidemiology of our own country receive a fresh impulse from discoveries made not by experts, but by medical practitioners working patiently on the lines of Dr Pickles." Pickles, in simple words that echoed those used by William Budd of his own practice, wrote that he had stood on the summit of one of the noble hills of Wensleydale, the attractive little lake Semerwater appearing to lie at his feet, and one by one he had made out most of the valley's grey villages, each with its thin cloud of smoke above it. "In all those villages," he recalled, "there was hardly a soul, man, woman, or child, of whom I did not know even the Christian name, and every country doctor of long standing could say the same of his own district."

Pickles died in 1969 at the age of 83. Like MacKenzie's, his practice had become a place of pilgrimage and he was visited there by two successive secretaries to the Medical Research Council, Sir Edward Mellanby and Sir Harold Himsworth. He had been Cutter lecturer at Harvard University, had been awarded an honorary DSc at Leeds University, had an honorary FRCP of the Royal College of Physicians of Edinburgh, and was a proper FRCP of the London college. He had a CBE and had been awarded the James MacKenzie medal of the Royal College of Physicians of Edinburgh and the Bissett Hawkins medal of the London college. And when in 1952 a group of general practitioners led by Dr John (now Lord) Hunt, encouraged by sympathetic specialist colleagues, sought to found a college of general practitioners there was no question in the minds of the founders of the college as to who should be the first president. It was a remarkable achievement for a country practitioner from a Yorkshire valley previously known predominantly for the quality of its cheese.

In his declining years Pickles was blessed by partnership with a husband and wife team who were outstanding doctors in their own right and who supported him with great loyalty. At the end of the second world war Pickles was looking for a new partner and took on a young Leeds graduate who had served as a medical officer in the Royal Air Force. Dr Bernard Coltman came for an initial trial period of three months. It was an appalling winter, the worst for 100 years, and some roads were blocked with snow for as long as eight weeks. Pickles was concerned that his new recruit would be discouraged. But the new doctor met everything in a sporting spirit and in June 1947 brought to Aysgarth a fellow Leeds graduate as his wife.⁹

It was Dr Katharine Coltman who, with her husband's encouragement, was to be the most active of Pickles's partners in continuing the traditions of research with which the practice had become so firmly associated. In 1974 she was visiting an aunt in Hull when she took the opportunity of attending the scientific meeting of the BMA, where she witnessed a demonstration of the McArthur medical microscope.¹⁰ Dr John McArthur is a remarkable man. Imbued with the philosophy that we are in this world for a purpose, he offered his services to the London Missionary Society as a young man. He encountered humiliation in Africa for befriending his African colleagues during the colonial era, and endured imprisonment by the Japanese after being captured in Borneo and despair when the World Health Organisation refused to take over his work on eradicating malaria in the postwar period. But despite all these vicissitudes he persisted with the idea that a microscope the size of a miniature camera and powered by conventional batteries could be used for work "in villages, in the field, or at the bedside."

Dr Katharine Coltman was impressed by the Hull demonstration and even more by Dr John McArthur's "Personal View," describing his "long, often disheartening life," published in the *BMJ* in December 1975.¹¹ The Coltmans purchased a McArthur microscope soon afterwards, at a cost of £260, with "a view to the early diagnosis of pyelitis of pregnancy and the possible prevention of irreversible renal damage associated with pyelitis in children." The instrument was used at the bedside, in the back of the practice Land-Rover, and in the surgery, and on one memorable occasion a urine sample was examined among the coffee cups of my own breakfast table, for my family home is within the confines of the Aysgarth practice. It proved a pleasure to use and was particularly valuable in diagnosing and treating recurrent urinary infection. As Dr Coltman pointed out, it was a very good example of how a simple examination, requiring the minimum of equipment and technical skill, could provide information of disproportionate value. Her work on urinary infection in general practice was published in a series of articles in the *Practitioner*,¹²⁻¹⁴ and in 1982 she received national recognition when the British Medical Association awarded her its Charles Oliver Hawthorne prize, a prize given for "systematic observation, research, and record in general medical practice."

The use of the McArthur microscope in general practice has also been described in detail by Dr Murray Longmore, whose *Atlas of Bedside Microscopy* describes his work during a general practice trainee year in the south west of England.¹⁵ This beautifully illustrated text shows how bedside microscopy can be applied to the study of blood films, white cell counts, and urinary deposits, and

that even phase contrast is within its capabilities. Undoubtedly it is equally valuable for diagnosing intestinal parasitic infection.

Virus infections of the respiratory tract

Pickles's influence, however, spread far beyond the confines of his own practice, and his work was an inspiration to another country practitioner, Dr Ian Watson. Born in 1909, the son of a distinguished epidemiologist, he qualified at St Thomas's Hospital in 1933 and proceeded MD in 1940. During the second world war he served in the Royal Army Medical Corps, working on the epidemiology of malaria. After the war he joined a general practice at Peaslake in Surrey, in the valley of the Tillingbourne, which he chose deliberately as offering opportunities for research in general practice. He was particularly interested in virus infections of the respiratory tract. By then, however, laboratory facilities in England were more highly developed than in the prewar period and Watson was able to establish a warm and fruitful relationship with Dr George Cook, director of the Public Health Laboratory at nearby Guildford. In this way the epidemic disease that he encountered was investigated not only with the classic clinical and epidemiological methods used by Pickles but also with the modern techniques of the diagnostic laboratory. He was therefore able to describe the atypical pneumonia caused by *Mycoplasma pneumoniae* infection in his practice and when there were outbreaks of unusual febrile illness he was able to show that they were due to Coxsackie A infection. One of those rare general practitioners who received grants for research from the Medical Research Council, Watson was also a founding father of the Royal College of General Practitioners and a founder member of its research committee. Also becoming honorary director of the college's epidemic observation unit, he twice, in 1954 and in 1959, won the BMA's highest research award, the Sir Charles Hastings prize. Like Pickles, he was president of his college, serving from 1970 to 1972. His death in 1979 deprived general practice of a remarkable naturalist, epidemiologist, and research worker, but his collected writings, a work of considerable scholarship with a foreword by another distinguished practitioner, Dr J P Horder, were published posthumously by the college in 1982.¹⁶

If so far I have dealt with the careers of individual general practitioners who have effectively contributed to medical knowledge it is because until recently few official bodies were sufficiently interested in research in general practice. In recent decades, however, several important developments have encouraged research by groups of practitioners working together towards a common end, rather than by the gifted amateur working on his own.

The importance of the foundation of the Royal College of General Practitioners cannot be underestimated.¹⁷ Among its responsibilities under its royal charter the college is charged to: "encourage the publication by general medical practitioners of research into medical or scientific subjects with a view to the improvement of general medical practice in any field and undertake or assist others in undertaking such research."¹⁸ The college has a research committee, which specifically supports and encourages research nationally. It has sponsored research fellowships, and from the earliest years much pioneer work was carried out.

Research at the RCGP

The institution of a number of college research units¹⁹ began with the establishment of a research and statistical unit in Birmingham, now directed by Dr Donald Crombie, which is currently concerned in important studies of national morbidity. In Manchester the college unit has undertaken distinguished collaborative work with several general practices on the use of oral contraceptives and their complications, illustrating how a national organisation such as the royal college can effectively bring together groups of practitioners to achieve statistically significant results that are of international importance. Other work sponsored by the college has included studies of the respiratory sequels of pertussis infection in children, risk factors in coronary heart disease, the disturbing effects of sterilisation in women, and the use of computers in recording

significant morbidity and family relationships in practice records accumulated over more than 20 years.²⁰ The amount of research carried out by members and fellows of the college is further attested by the more than 150 theses based on work in general practice now preserved in the college library.²¹

The college research units have, however, continually faced problems of insufficient staffing and lack of security of tenure for research staff. There also appears to have been some ambiguity in relationships between the units and the college itself. The units also face increasing competition from the universities. The first professor of general practice in Britain, Professor Richard Scott, was appointed by the University of Edinburgh in 1963,²² and few medical schools now do not have a department of general practice. In fact, as Marshall Marinker has pointed out, "not to have such a department is no longer the hallmark of the traditionalist or the super technologist, but merely of the quaint."²³ Until now many university departments of general practice have concentrated on operational or health services research, while the college research units have tended to focus on research into major problems of public health. In the future the university departments will no doubt more effectively complement the research role hitherto the prerogative of the college.

In all aspects of research one of the most important influences has been the scientific society or club. In Britain the Royal Society, the Associations of Physicians and Surgeons, the Pathological Society, and a wide variety of other specialist societies or research clubs have all provided an important forum where friendships may be made, ideas exchanged, and collaborations established. In 1969 a General Practitioner Research Club was founded in Britain after a 10 day course at the Royal College of General Practitioners on research methods in general practice.²⁴ Subsequent meetings were usually a series of whole day symposiums on a Saturday, preceded by an informal dinner on the Friday with no speeches and no formal seating plan. The meeting often started with a presentation by a

statistician speaking on some aspect of research methods. Other typical topics might include critical studies of developmental tests in the delivery of medical care to children, middle ear disease, the behaviour of different ethnic groups in respect of consultation, as well as the experiences of a British general practitioner temporarily working in primary care in a country such as Sri Lanka. British general practitioners are by no means chauvinistic. There is an active European general practice research workshop, to which an increasing number of practitioners from all over Europe belong and which in 1985 held a successful one week training course at Northwick Park, where the Medical Research Council's Clinical Research Centre and Epidemiology and Medical Care Unit are situated.

Role of the MRC

So far I have said little of the role of the Medical Research Council in Britain. The MRC, originally the Medical Research Committee, founded in 1913, came into being in its present form in 1920. In 1914 Sir James MacKenzie (in the later years of his consulting practice in London) had suggested forcibly to the Medical Research Committee that disease in general practice presented itself in a totally different manner from that in hospital practice; there was an urgent need to encourage research into the early stages of disease and into the course and natural history of chronic disease. Although there was some sympathy for MacKenzie's views, there was general agreement then that little would be achieved by supporting research by general practitioners and no advances in knowledge were likely to come from the amassing of clinical facts by untrained observers,²⁵ a view belied by subsequent events in Wensleydale. MacKenzie retired from London practice in 1919 and set up at St Andrews in Scotland an institute of clinical research, which was to concentrate on the early symptoms of disease and its natural course,

but which would also be concerned in training general practitioners. MacKenzie approached the then secretary of the MRC, Sir Walter Fletcher, somewhat reluctantly and with a degree of belligerence that Fletcher took in good part, for he gave a measure of support to the venture until MacKenzie's death in 1925. Without MacKenzie, however, the institute gradually declined and the council, which had been invited to take it over, decided that the project was no longer viable.²⁵

William Pickles shared MacKenzie's views on the importance of the general practitioner in medical research, arguing in respect of his own studies of epidemic myalgia, for example, that "no consulting physician can have the opportunity to follow the whole course of such a disease in the same way as a general practitioner." Pickles was aware that by the late 1920s the MRC was investigating epidemics in boarding schools in England, and, writing in 1939, he suggested that similar work could well be undertaken by "a number of doctors practising in remote districts in different parts of the country," going on to suggest that such a service should be organised by the MRC.²⁶ In the years since then there have been desultory attempts by the council to encourage research in general practice. In 1947 an epidemiological research unit was set up at Cirencester in Gloucestershire under the direction of Dr R E Hope Simpson, who was in practice there. Among other achievements Hope Simpson confirmed that herpes zoster and varicella were due to the same virus,²⁷ an association that had been first made in Belgium in the 1880s and further investigated by Pickles during his own epidemiological studies.

Mild hypertension trial

In the modern era, however, the MRC has established just such an organisation as Pickles originally suggested. Stimulated by Professor (now Sir) Stanley Peart, in the early 1970s the council decided to investigate the value of treating mild hypertension in general practice. A successful pilot study was first carried out,²⁸ and in 1977 a working party was set up to guide an investigation into whether drug treatment of mild hypertension would be associated with a reduction in the number of deaths due to stroke or to coronary artery disease. At the same time the opportunity was taken to compare the effects of two different therapeutic regimens and to assess the incidence of adverse reactions and side effects. It was a mammoth undertaking coordinated at Northwick Park by Dr W E Miall working in the council's Epidemiology and Medical Care Unit directed by Dr Tom Meade, and with the help of Dr Gillian Greenberg. The interest of potential participants was attracted by letters in the *Journal of the Royal College of General Practitioners*, the *Lancet*, and the *BMJ* and to a small extent by direct approach from colleagues. The requirements were that there must be at least one interested partner in the participating practice, a list size of 8000 or more, and adequate space for research to be carried out and papers and drugs safely stored. Participating doctors were reimbursed at clinical assistant rates and nurses, who carried out the greatest proportion of the actual work of measuring blood pressure and recording progress, at standard scales of pay.

About 175 group general practices all over England, Scotland, and Wales took part in this study, and the results have now been published.²⁹ Some 17 354 patients were recruited and 85 572 patient years of observation accrued. An enormous amount of valuable data emerged. Evidence was provided that active treatment was associated with a reduction in the rate of stroke overall, but there was no clear effect on the incidence of coronary events. In terms of actual numbers, however, it was perhaps disappointing to critics of the study, some of whom appear to be less than sympathetic to the use of the MRC's resources for controlled clinical trials, that for every 850 mildly hypertensive patients treated for one year only about one stroke would be prevented. Nevertheless, as always with well conducted trials, the facts were established and are there to stay.

There is, however, far more to the establishment of the MRC's general practice research framework than the treatment of mild hypertension. It now includes about 300 general practices nation-

wide. A remarkable and unique instrument has been set up with which a wide range of other problems may now be investigated in general practice, something that would have been dear to the hearts of both MacKenzie and Pickles. Among other topics the feasibility stage of a study of low dose anticoagulant therapy in the prevention of acute coronary occlusion has now been reached and studies are in progress to investigate the role of the general practitioner in the prevention of problem drinking. An investigation of the use of hormone replacement therapy for menopausal symptoms has just been completed, and an interesting proposal is at the design stage for a study of the most effective way in which general practitioners can help their patients to stop smoking. The Epidemiology and Medical Care Unit aims at continuing to foster such studies (T W Meade, personal communication).

For the future I believe, with Professor J G R Howie,³⁰ Dr John Fry, and many of their colleagues, that there is still a role for the individual general practitioner in the prosecution of research, particularly in the study of infectious disease, the organisation and running of primary care services, the use of drugs, or social problems such as behavioural disorders and bereavement, as well as the management of pain and the care of the chronically ill. I also believe that collaborative studies between many general practitioners, as in the investigation of the problems of the contraceptive pill by the college research unit or in the MRC's hypertension trial, have already shown their value. Furthermore, it is important not to accept that you are incompetent because a schoolmaster of limited brain thinks you are an idiot, or to be discouraged if some elderly examiner fails to recognise your virtues in a final examination. It has surely also been established that the surgery of a general practice may have just as much right to be known as a "centre of excellence" as any of those metropolitan institutions of higher learning that lay exclusive claim to that title.

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Clinical Research Centre, Harrow HA1 3UJ

CHRISTOPHER C BOOTH, MD, FRCP, director

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No Christmas in China

In the People's Free Republic of China we do not have Christmas. We have Chinese New Year, the Moon Festival, Dr Sun Yat Sen's birthday, and Independence Day, but no Christmas. We do not have weekends either: they are a Christian invention. We cannot easily buy radios that receive stations outside Taiwan, and our post is opened (both for political purposes). We cannot take photographs of the stunning sea views (for defence reasons), but what we can do is buy drugs—lots of them, all sorts, all colours, all shapes, and all sizes, with or without package leaflets—and have injections, compresses, or infusions from a doctor, a chemist, or even a friend. It used to be that the local chemist could put up an infusion for you—again with a wide choice of stock, cost, pharmacological effect, volume, and venous access site, and all available with or without medical or paramedical advice.

That is, I guess, if you have the money. If you have not the various government health insurances cover you, or nearly cover you, unless you are one of a minority group—of self employed Bunin or Ami tribal peoples, for example—who cannot afford the cost of insurance even after working seven days a week on the land. How do they manage? Very poorly indeed when the cost of one day's pain relief equals a day's earnings. Alternative sources of medical care are the mission hospitals, which provide a complementary service to the people alongside (or probably after) the traditional bone setters, acupuncturists, herbalists, chiropractors, moxibustionists, and local Taiwanese doctors.

Being brought up on a good British diet of the *Prescriber's Journal* and the *British National Formulary*, and with a hand on my heart belief in the goodness of the *Drugs and Therapeutics Bulletin*, it was all a bit much—the pink tablets, the green ones, the little orange ones (unlabelled, unmarked, with no expiry date), all prescribed in the past few days by different doctors for the same symptoms. Where are the old stalwarts? Butazolidine, for example, or the contact amoebicide clioquinol: reliably made, quality controlled, and with package leaflets and marketed only after painfully expensive animal studies, studies on human volunteers, and controlled clinical trials. Effective and inexpensive, made by reputable transnational companies, but nevertheless withdrawn because Western standards of risk assessment and Western views of the quality of life have been assumed with some arrogance, to be globally applicable. The resultant cultural imperialism is applied and felt here by restrictions imposed there.

Why is it that one or two articulate pharmaceutical experts can hold sway, determining the comfort or disease of so many people? And how can they so glibly assume that they are uniformly right and mobilise media support for their own particular twentieth century pharmaceutical crusades? Everyone knows that amidopyrine can cause bone marrow aplasia, but the risks of snake bite, the effects of crop failure, and the perennial problem of poverty are far more relevant here.

Isn't it time someone told the drug consumerists that we do not have a Christmas in China?—T TAULKE-JOHNSON, Holy Cross Hospital, 95601 Kuanshan, Taitung Hsien, Taiwan.