Your leading article last year on electromagnetic induction of bone began by reporting that pulsed electromagnetic treatment of fractures had been used in over 11 000 patients world wide.[1] It ended by reviewing our random allocation of 16 patients with ununited tibial fractures of at least 12 months' duration to treatment with either an active or a dummy pulsed magnetic field stimulator contained within a full non-weight bearing plaster.[2]

We designed the group sequential trial in the tentative belief (according to the then prevailing wisdom) that in patients with ununited fractures of the tibia at least 12 months after injury the effects of the pulsed magnetic field component of an overall treatment regimen might increase the true percentage of patients achieving clinical union 24 weeks later from under 5% to something over 80%. More cautiously, however, the trial was to have a 95% probability of detecting, at the 5% level of significance, a true difference of as little as 35%—for example, 5% in the dummy group and 40% in the active group.

Our interim results from these 16 patients enabled us to exclude as unlikely a true improvement of active over dummy treatment of 35% since the upper 95% confidence limit for the true difference (active minus dummy) was 33% (lower limit was −61%). Moreover the trial provided a plausible reason why the true improvement (if it exists) was unlikely to be as high as 35%. Five out of seven patients on dummy treatment achieved union, so that we might reasonably assume that conservative management including immobilisation (which was given to active and dummy treated groups) may lead to union of a much higher percentage of fractures than the 5% previously assumed by some. This leaves less room for improvement by electromagnetic treatment.

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Philosophical medical ethics

Sir,—In his concluding article Dr Raanan Gillon brought out the multifactorial and variable nature of moral decision making (22 February, p 543). This variability is well illustrated in his discussion of management in the case of an infant with Down's syndrome.

Many doctors seem to operate a double standard of morality when dealing with a fetus or infant as opposed to an adult patient and when assuming that a qualitative difference exists between active killing and passive euthanasia. Dr Gillon draws a distinction between morally significant properties intrinsic to individuals and those optionally imposed from outside by other individuals or groups, perhaps implying that the former properties (such as a definition of "personhood") might provide some constancy on which moral behaviour could be based. However, there seems to be little practical difference between these two categories as both are widely open to interpretation, as are the principles of respect for autonomy, benificence, non-malificence, and justice.

Contemporary society and professional practice offer no invariate moral standards, leaving the individual practitioner adrift in a sea of subjectivity. Each practitioner has a responsibility to develop his own professional conscience to guide him when faced with moral decisions in his sphere of work. When society and medical practice are such shifting sands of consensus morality, compounded by professional expediency and media pressure, where are standards on which to base such a moral development to be obtained?

Part of the answer lies in a reappraisal of Christian morality, which claims absolute rather than relative standards, though obviously the factor of human interpretation makes them less absolute in everyday life. At least some of our current moral uncertainty probably follows the transition from a society with a widespread (albeit often nominal) acceptance of the Christian outlook on life to the post-Christian era. Moving away from widely accepted moral standards into a subjective free for all is likely to make our efforts towards correct moral decision making far more difficult.

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Addition of rifampicin in persistent Haemophilus influenzae type B meningitis

Sir,—The report from Drs Malcolm A Lewis and Betty L Priestly (15 February, p 448) of *Haemophilus influenzae* meningitis eventually responding to rifampicin was of interest because of a similar case here.

The patient, an 8 month old infant, presented with a 24 hour history of fever, malaise, and grand mal convulsion. The cerebrospinal fluid showed numerous Gram negative rods and a white cell count of 500×10^6/l and later grew *H influenzae*.

Initial treatment was with intravenous ampicillin (200 mg/kg/day) and cefuroxime (200 mg/kg/day), leading to some improvement in the child's general condition, although he remained febrile. On day 5, however, he became more feverish and neck extension was pronounced. On day 7 a repeat lumbar puncture showed only 90×10^6/l white cells, and no microorganisms were cultured. A cerebral ultrasound scan performed on day 9 showed no subdural collection. At this stage treatment was continued with oral ampicillin alone but the next day there was further deterioration and another lumbar puncture showed an increase in the cerebrospinal fluid white cell count to 180×10^6/l. Intravenous chloramphenicol (100 mg/kg/day) was started. Again, there was some improvement but at day 16 he was still febrile, miserable, and stiff necked.

At this point, after the appearance of the article by Drs Lewis and Priestly, rifampicin (20 mg/kg/day) was started and clinical improvement was rapid and impressive. A computed tomogram at day 18 was essentially normal apart from prominent cerebral sulci, widened ventricles, and widened sylvian fissures. There were no features of ventriculitis. At day 26 clinical improvement was maintained and a lumbar puncture showed a white cell count of only 9×10^6/l. The patient was discharged to complete two weeks of rifampicin.

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Combined use of vasopressin and synthetic hypothalamic releasing factors as a new test of anterior pituitary function

Sir,—Dr L M Sandler and colleagues have reported the value of a combined releasing factor test including administration of vasopressin for evaluating anterior pituitary function (22 February, p 511). They state that this is a "safe, rapid, and useful test" and of value in the postoperative management of patients who have undergone surgery for pituitary tumours.

We have been investigating the physiological effects of argipressin on haemostatic function in man and found that infusions as low as 1·0 IU over one hour produce increases in both coagulation factor VIII and plasminogen activator activity.[1] Moreover, during major abdominal surgery similar levels of argipressin are associated with increases in factor VIII, shortening of the activated partial thromboplastin time, and release of fibrinopeptide A, suggesting the development of a hypercoagulable state.[2] In addition to an effect on haemostasis, argipressin causes vasoconstriction.[3] The combination of altered haemostatic function and vasoconstriction could well account for the risk of myocardial ischaemia which is recognised to occur with administration of vasopressin in treatment of oesophageal varices.

In view of the increased risk of thromboembolic disease in the perioperative period, and the possibility that the administration of vasopressin at this time may contribute to the effect, we feel that a degree of caution is warranted before this test is universally used.

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Whose data are they anyway?

Sir,—In the two excellent leading articles on access to records (1 March, pp 577, 578) the most interesting point is that too much emphasis is being laid on the abnormal and too little on the normal patient's needs and circumstances.

Ms Molly Baldry and others discovered that 12% of patients found their records inaccurate, but this has no precise meaning and is a typical example. What is an inaccuracy? What is its significance? Similarly, the "authoritarian doctor" is a neat bogey man but what does it mean? How many of these people exist? How important are they overall? Our concern must really be for the normal patient and the normal doctor. At present there is a danger that emotive action overshadows reason. The recruitment of Dr Ralph Nader, the distinguished American lawyer who recently expressed his support on television for the campaign for access to notes by patients, expresses a false viewpoint also, for transatlantic ethics and needs are not necessarily pertinent here. Our correct approach is to ask if full disclosure is necessary and why. What are the defects in our present system and how does it need to be modified? In any case why will revolution be better than evolution?

If the reason for change is that a patient may not have confidence in his doctor surely the patient should change his practitioner. If there is not mutual confidence, no amount of note searching will compensate and the sooner the relationship ends the better for both sides.

What other reason is there? The only likely one is that the patient wishes to trap or attack his doctor legally. If this is so it seems strange for Dr Nader to support such philosophy, coming as he does from a

country where a man is not expected to give evidence which is against his own case. It is the action of American lawyers that has led to so much defensive medicine in the USA—a practice that is now spreading here. Overall this does not help patients.

What, however, is the prime purpose of medical records? Are they intended to be legal documents; are they for treating the patient? If the latter then the doctor may wish to record thoughts for future reference. We do not think out loud in ordinary social intercourse: must we do it in our medical relationships?

Professor David Metcalfe (p 577) refers to "shared and eventually agreed facts." Medicine, however, is not a matter of simple facts. It is a melange of history, tests, impressions, deductions, possibly followed by further tests and culminating in a decision based on experience and judgment. If records are confined to facts they will be rather bare, rather like a policeman's statement of a crime. It would be impossible in notes to express opinions and necessary instead to make a list of every possible alternative—a fault we try to eliminate from our students' histories. The difference between an artisan or a bureaucrat and a professional man is that the former record and act by rote, the latter by judgment. This is why the professions are expected to regulate themselves and to ensure loyalty to clients' interests.

If the free access group succeeds what must the doctor do? It would seem that he needs two sets of notes: records that are shown and aides memoire which are personal. The former are likely to be self protective. I doubt that this will really help the patient: it will increase paperwork, foster defensive medicine, and abolish confidential communication between doctors.

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SIR,—We wish to add our strong support to the opinion of Mr A P Ross (1 March, p 578). Members of almost every branch of medicine could offer their own particular examples of danger in providing patients (or their parents or guardians) free access to their medical records, so we do not wish to add even one anecdotal story.

Our purpose in writing is to publicise the fact that the members of the medical staff committee of this hospital have unanimously agreed to recommend that no free access should be given to medical records and that patients (parents or guardians) should be advised to approach the appropriate consultant to discuss the contents of any record if they so wish.

We are worried that, despite our opposition and that of those who agree with us, the option of providing free access may none the less be conceded because insufficient members of the medical profession feel strongly enough to voice their opinions. We sincerely hope that this does not happen.

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Mortality in patients with testicular cancer

SIR,—Drs Matthew Ellis and Karol Sikora conclude that chemotherapy with cisplatin alone or in combination with etoposide and bleomycin should be regarded as the treatment of choice for metastatic seminoma except in stage IIA disease (8 March, p 672).

In the past retroperitoneal node irradiation has been regarded as the treatment of choice for stage II seminoma. However, because of the high risk of supradiaphragmatic node or more distant relapse chemotherapy should now be regarded as the treatment of choice for those with stage IIC disease (node mass >5 cm).[1]

For those in stage IIB (node mass 2-5 cm), however, retroperitoneal node irradiation would appear to be effective. In one series only 3 of 40 (7·5%) patients with stage II disease without palpable node masses relapsed,[2] and in another series 2 of 11 (18·2%) patients with stage IIB disease relapsed after radiotherapy.[3] At this centre between January 1979 and December 1984 seven patients with stage IIB seminoma were treated with retroperitoneal node irradiation (30 Gy, 20 fractions, 4 weeks). One patient treated in 1979 received prophylactic mediastinal irradiation (a practice no longer carried out). Only one patient relapsed with mediastinal and supraclavicular lymphadenopathy and achieved complete remission with cisplatin. All seven patients remain alive and disease free two to seven years (median 3½ years) after radiotherapy.

Although metastatic seminoma is very sensitive to cisplatin based chemotherapy, long term follow up is not available. Seminoma metastases are extremely sensitive to even modest doses of radiation, and retroperitoneal node irradiation would appear to be effective therapy for those with stage IIB disease, allowing chemotherapy to be reserved for those patients with bulky abdominal nodes at presentation and for the minority who relapse following radiotherapy.

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Reye's syndrome

SIR,—Dr J A Morris and Mr D Z Shapiro (8 February, p 379) raised the issue of underdiagnosis or misdiagnosis of Reye's syndrome by possible inclusion of cases of inborn errors of metabolism. Since the original definition of the syndrome the diagnostic criteria have become more complex. The syndrome is believed to represent a response to a universal mitochondrial injury with corresponding disturbance of mitochondrial enzymes and normal cytosolic enzymes.[1] Many published cases of Reye's syndrome were diagnosed on the basis of clinical symptoms and biochemical results and relatively few had a liver biopsy, while other investigators have rejected those cases of clinically and histologically apparent Reye's syndrome where histochemical reaction for succinic acid dehydrogenase was equivocal.[2] Other cases, resembling our own, have been diagnosed at necropsy, having presented as sudden infant death syndrome, often without symptoms of encephalopathy and without antemortem biochemical data.

Analysis of 21 sequential necropsies in children under the age of 2 years in Bournemouth in 1981-5 revealed eight cases of probable Reye's syndrome presenting as sudden infant death syndrome. The relevant data are summarised in the table.

Consolidation of lungs due to pneumonitis was found in seven and inhalation pneumonia in one. Increased brain weight and histological findings suggested oedema. All livers displayed virtually diffuse microvesicular steatosis on fat staining.

Is the pathologist's diagnosis of Reye's syndrome justified in such circumstances? Howat *et al* suggested that such diagnosis should not be made without tests for mitochondrial enzyme activity.[3] Their five samples of frozen livers from 14 cases of apparent Reye's syndrome presenting as sudden infant death syndrome showed preservation of cytochrome oxidase and succinic dehydrogenase, which is uncharacteristic of Reye's syndrome. Two of these five cases displayed deficiency of medium chain acetylcoenzyme A dehydrogenase. The question arises whether the latter was acquired or inherited and what were the other histochemically normal livers with diffuse fatty change if they were not Reye's syndrome?

It is unlikely that extensive enzyme histochemistry in decomposing tissue, often many hours after death, could become adopted as a major diagnostic aid. Screening of subsequent siblings for inborn errors of metabolism seems more useful.

One takes a certain comfort in the observation that, despite the reports of family clusters of Reye's syndrome, none have occurred in identical twins and that only some of the siblings suffering from the same prodromal illness develop the syndrome.[4]

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Details of eight cases of Reye's syndrome diagnosed at necropsy

Case No	Sex and age	Month of death	
1	M 3 weeks	July	Brother had measles, postmortem measles titre 1/64
2	M 5 weeks	June	Inhalation pneumonia
3	M 6 weeks	April	Influenza B 1/32, adenovirus 1/32
4	M 7 weeks	July	Influenza B 1/32
5	F 3 months	January	Poor domestic circumstances
6	M 4 months	February	Chest infection for 2 weeks
7	F 5 months	March	Clinical chest infection, postmortem adrenal neuroblastoma, enlarged thymus
8	F 18 months	October	History of lethargy, abdominal lymphadenopathy, lymphoid hyperplasia of terminal ileum, Epstein-Barr virus 1/32

Recognising whooping cough

SIR,—In his timely review (8 February, p 360) Dr Harvey Marcovitch notes that "the laboratory has something to offer" when the clinical diagnosis of pertussis is uncertain. Unfortunately, his faith in some tests is misplaced.

There is one reliable laboratory method—culture of pernasal swabs from the nasopharynx.