MEDICAL PRACTICE

New Horizons in Medical Ethics

Research Investigations in Children

This tape-recorded discussion was devoted to some ethical problems of research investigations in children. In their working papers, circulated before the discussion, Dr. A. White Franklin, a consulting paediatrician, argues that doctors may harm children more in the name of treatment than of research; Dr. A. M. Porter, a general practitioner, that in Britain the lack of research in this age group is based on legal advice from one person only; and Dr. D. Noel Raine, a consultant paediatric chemical pathologist, that legal considerations which totally prevent progress should be disregarded. The working papers are printed below, followed by the discussion, which was chaired by a member of the B.M.J. *editorial staff.*

Science as Handmaiden

ALFRED WHITE FRANKLIN

When, in the Declaration of Helsinki,[1] the doctor declares that "the Health of my Patient will be my first consideration," he does not abjure other considerations. His proper ambitions to enlarge his knowledge and to perfect his skills may lead him to practise medicine, not only as an art, but also as a scientific exercise, and as a result to make himself and his colleagues better doctors. He does not abjure either the laudable desire for fame and fortune, nor the somewhat less laudable pleasure that arises from the exercise of power. He should, however, recognize how these strong feelings may influence his judgement.

The Declaration allows clinical research to be combined with professional care if there is therapeutic value for the patient, which is spelled out as saving life, re-establishing health, and alleviating suffering. The Medical Research Council[2] widens the scope and seems to allow indirect as well as direct benefits for the actual patient by adding prevention of disease and "increased understanding of his case."

Provided that he is not negligent, the registered doctor may hurt, maim by surgery, poison by drugs, or even bring about the death of his patient without penalty. The tacit understanding is that, even though the result is disaster, the doctor's intention was to help. Were he by design to hurt, maim, poison, or kill his patient, he would be committing a crime. The practical difficulty arises when what is planned lies somewhere between accident and design, because the doctor, for his own purposes as much as for the patient's possible benefit, is submitting him to a procedure about which neither the chances of success nor the severity of the risk can be accurately measured. This experimental procedure may be clinical, either diagnostic or therapeutic, or it may be non-clinical, the object being to provide physiological observations on normal values or states and the extent of variations of the normal under natural and experimental conditions.

In all this everyone attaches absolute importance to the free and willing consent of the patient, the patient understanding fully what is to be done, why it is to be done, and the discomfort and risk entailed. This informed consent can be given neither by the mentally handicapped nor by children. Parents or guardians should be able to give consent and if they cannot under the present law, new legislation is needed.

None of the official pronouncements concern themselves with the nature of what is done to the patient; all concern themselves with the intentions and the attitude of mind of the doctor. What these are only the doctor himself can really know, and then only the doctor with sufficient insight. For example, a doctor might persuade himself that constipation and bowel toxaemia cause many diseases and that the best treatment for constipation is colectomy. Or he may blame disease on

sinusitis and conduct as a preventive measure the radical excision of the sinuses. Supremely confident in his opinion, he soon finds a supply of willing victims. This is neither an experiment nor a trial of treatment. To the medical world outside, it is an abuse of power; to the doctor himself, it is a missionary endeavour. Nothing except a lack of patients can prevent him from doing what he thinks right.

Now if these doctors were not quite so confident and agreed to a properly controlled trial, they would at once come under the code of ethics of experimentation. No doubt their colleagues would place a veto on the project—correctly in these cases—but would it always be correct for an innovation in treatment? Trials of treatment, adequately controlled, are less alarming than the excessive use of unpleasant or dangerous methods of diagnosis. The latter may be carried out as much in the interest of the doctor as of the patient. That is to say, that the doctor has planned a routine procedure to be applied to all patients, partly to save himself from thinking and partly to ensure a "complete" investigation against the day when the record might be used for some clinical investigation. The anxiety induced in the patient and his relatives, and the discomforts and dangers of the diagnostic procedures are not always weighed in the balance. The sum of anguish resulting from these unfruitful activities is considerably larger than that involved in rational and well-controlled trials of treatment, which relieve suffering rather than produce it, and for which the name of experiment may truly be inappropriate.

The exploitation of one person by another presents ethical problems not only in medicine but in every sphere of economic, social, and domestic life. Any abuse has a special importance in medicine because of the privileged status bestowed by law upon the registered medical practitioner and by the public through the tradition of esteem and confidence in which he is held. Every doctor should be acutely aware, as he conducts his routine work as well as his clinical research, of how vital are these privileges. In conducting himself so that their foundations are eroded, he may well be making impossible in the future any advances in medicine. Science is handmaiden to the art of medicine and so should remain.

Medical Ethics and Minors

ALAN M. W. PORTER

Ethics is an attempt to resolve the tension between the rights of individuals and the rights of society. At one end of the spectrum is the promise of good to come, the hedonistic notion of the individual as an end in himself. At the other end is the call to duty, the Platonic social idealism, which sets man firmly in his social context. In our present society there can be no doubt that ethical custom in medicine emphasizes the rights of the individual and tends to ignore any rights which society may possess. The origin of this outlook must be considered to be western law based on the Christian tradition of the infinite worth of the individual. After the war this tradition was emphasized by the various declarations in respect of medical ethics—the Nuremberg Code, the Helsinki Declaration, the pronouncements of Pope Pius XII, and the teachings of the Medical Research Council. I suggest that these rulings were in part a reaction—an over-reaction—to the excesses of the Nazi experiments and that if there had been no World War II we might today have a different ethical outlook. I do not question the tradition we have inherited, only its contemporary emphasis.

I must therefore, disagree with the current practice—or lack of practice—in experiments on children. The concept of a "risk-benefit ratio" is a useful one.[3] An experimental procedure not for the direct benefit of the child may be minor and involve only remote risks—the possible benefits may be enormous. At the other extreme a painful and risky procedure might be done by an imprudent researcher in pursuit of a dubious hypothesis. The first has an acceptable risk-benefit ratio—the second does not. May one undertake the first? In Britain the Medical Research Council is usually cited as the authority and, at first sight, the answer is that one may not; "In the strict meaning of the law parents and guardians cannot give consent on their behalf to any procedures which have no particular benefit to them and which may carry some risk of harm."[2]

What is this "strict view of the law" which dismisses so many research possibilities? According to two American doctors[4] it originates from the advice of one legal adviser only—the Procurator General and Treasury Solicitor of this country between 1964 and 1971. Further, this authority was unable to "cite any statute or decided case which is exactly in point." In other words, there is no legal precedent to back this opinion, though there is no doubt that it is the orthodox view. One recognizes that the law must have a special concern for children, the weak, and the mentally retarded, but the urge for law to categorize is inappropriate in this context. There are grounds, however, for believing that it may be permissible and reasonable to undertake minor procedures on children for experimental purposes with the permission of the parents.

Collective Tradition for Honest Dealing

D. NOEL RAINE

As with statistics, the *Oxford English Dictionary* can be used to prove anything; it is therefore not to be quoted as an authority but rather as a starting point of a debate. *Ethics* is defined most suitably as "the department of study concerned with the principles of human duty." *Duty* is the "action that is due in the way of moral or legal obligation." Duty does not comprise both moral and legal obligation; these are separate—that is, there are two kinds of duty; moral duty and legal. *Moral* is an adjective "pertaining to the distinction between right and wrong in relation to the actions of responsible beings." *Legal* duty is usually well defined in either statute or precedent. Since legal duty is man-made it must succeed moral duty, relating as closely as possible to it and serving to reinforce it. Should the two forms of duty ever be in conflict the moral duty must take precedence over the legal.

Thus three situations arise, in the last two of which ethical problems may occur: firstly, moral and legal duties are in agreement; secondly, moral and legal duties are in conflict. All studies on children, mentally subnormal or mentally abnormal subjects, the aged approaching death, and others not competent to give "informed consent," are prohibited by case law if not by statute. Thirdly, moral duties are not yet covered by the legal code. This includes matters relating to transplant surgery, genetic engineering, conditioning therapy, and prenatal intervention.

Several guides on ethical matters already exist, but they are either limited or need to be interpreted against the background in which they were formulated. The question of children is referred to in only some of these. The Declaration of Helsinki allows the legal guardian to consent to non-experimental clinical research on those legally incompetent to give consent. The M.R.C. document states the legal position about informed consent and expressly forbids non-therapeutic research "which might carry a risk of harm." The interpretation of the word "harm" can vary so widely that in practice the phrase is not helpful. The editorial, "Treatment-Research-Experiment?" used as a guide for acceptance of work for publication in the *Archives of Disease in Childhood*[5] allows parents to consent to "procedures not in the ordinary course of medical care."

Overlooking the problem of those incompetent to give informed consent, there are impediments in both areas of "informing" and "consenting."

(1) To give full information concerning a study may result in distressing information being revealed prematurely. For example, it may be desirable to try new treatments for leukaemia in a child whose parents have just discovered he is "anaemic." Similarly, experimental therapy in children with progressive mental disorders diagnosed before the onset or at an early stage of clinical involvement, may call for detailed discussion of the outcome should no treatment be attempted before this is acceptable to the parents. (This should not be used as an excuse for not giving information because this would reduce the changes of obtaining the desired consent).

(2) Almost all procedures have some, albeit very slight or unsuspected, "risk of harm." It may be slight in the sense of anaphylaxis after injection of penicillin or slight in the sense that an unnecessary venepuncture by a white-coated doctor may unsettle a child when he needs medical attention in the future.

(3) Knowing that in law the doctor who conducts non-therapeutic clinical research on those incompetent to give informed consent exposes him to the possibility of a charge of assault can affect the manner in which the legal guardian is "informed."

(4) In many instances the technicalities of a study cannot be assessed by the subject and he is likely to decide whether to agree to it on his assessment of the personality of the doctor. Here other pressures, such as not offending the doctor on whom his subsequent care depends, inevitably influences his decision.

In practice the doctor must give a balanced view of all the considerations, a situation comparable to the direction given by a judge to the jury before they retire to consider their verdict.

Just as there are national differences in temperament, ways of life and standards of living, so the establishment of ethical standards can be expected to vary. It should be the right of each national group to determine its own standards, but this need not preclude attempts by other groups to improve those standards by education and external pressures such as restricting either financial support for research or the publication of results in international journals. Nevertheless, policies concerning these pressures should be determined by the profession rather than by the public, who are inclined to give an emotional rather than a rational opinion.

For the future, the profession must seek to educate the public in the need to join with it in a common exploration of medical problems. Meanwhile legal considerations which totally prevent progress in medical science should be disregarded and in the words of the editor[5] of the *Archives of Disease in Childhood*, "the protection of the public" must "continue to rest upon the maintenance of a collective tradition for honest dealing."

Illustrative Case Histories

RELATION OF LEAD INGESTION TO FEBRILE CONVULSIONS

Object.—to discover if children presenting with febrile convulsions had previously been subject to unusually high lead ingestion.

Procedure.—blood taken at time of admission with febrile convulsions for usual investigations and for lead determination. One month after recovery blood to be taken for further lead determination. This result should reflect the base line level of lead and will be unaffected by fever. Where opportunity presented blood would be taken from febrile children who did not have fits.

Objection.—the venepuncture one month after recovery does not contribute to the well-being of the subject. The project was abandoned.

TREATMENT OF HAEMOLYTIC URAEMIC SYNDROME

This may be treated by (1) supportive therapy and dialysis; (2) administration of heparin as an anticoagulant; (3) administration of streptokinase as a more potent anticoagulant and lytic agent. Several individual centres each claim good results with each of these forms of treatment, although the best results are quoted by centres using the potentially dangerous streptokinase. Only a randomized trial will decide whether the theoretically more dangerous drug has any advantage. The success claimed for the three orders of treatment can be explained if one is treating a mild case by dialysis, a case with limited thrombus formation with heparin, and a severe case with streptokinase.

Individual paediatricians, who are generally more protective towards their patients than adult physicians, may object to a controlled trial because it means that a mild case—which they consider, probably erroneously, they can recognize on the severity and duration of symptoms—may be chosen for treatment with streptokinase. Conversely a severe case may be selected for treatment with dialysis which the clinician feels is inadequate. A well-planned trial is necessary as it may provide guidelines to the selection of the best form of treatment for individual cases. Thus it may be possible to treat mild cases with dialysis alone and restrict the use of streptokinase to severe cases with extensive fibrin deposition.

TREATMENT OF SICKLE CELL CRISES

A preliminary communication suggested that patients with painful sickle cell crises showed rapid clinical improvement when treated with ancrod, an anticoagulant. Other investigators were doubtful of this and feared the possibility of a serious bleed into an infarcted tissue. It was considered important to establish the value or otherwise of the drug by conducting a controlled trial on as few patients as possible. A semiquantitative scoring system for clinical symptoms was devised as part of a double-blind trial and this allowed a valid conclusion to be reached after only five patients had been treated with the drugs. As the results did not differ from those in five untreated patients it is considered that therapy was not justified in a larger number of patients. Thus a properly controlled trial limited the risk to a minority of patients.

Appointments of Speakers

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Discussion

DR. FRANKLIN: The debate on this topic has recently become much more acute because of the development of academic child-health departments, which didn't exist before 1950. I'm very glad about this evolution, because to learn about the abnormal you need to know the normal; you can save the lives of many newborn babies and prevent mental handicap as the result of careful research—there's no other way.

CHAIRMAN: When you talk about research do you mean a deliberate programme of research, or studies done en passant, say, on blood specimens taken for therapeutic investigation?