Report (1966), in which there was provision for direct reimbursement for ancillary help, other than doctors' wives.

In 1967 the Annual Representative Meeting passed the motions referred to above. M.M.S. was prepared to conduct a survey into this matter, since it held that its basic claim that doctors' expenses were assessed at an artificially low figure was unchanged by the abolition of the Pool. In the late summer of 1967 M.M.S. told Council that it proposed to offer its services to all general practitioners, and asked for B.M.A. support. At a special meeting in October the Council decided not to support M.M.S. at that time and to conduct the survey independently of the company. As that meeting was in camera the debate was not reported. It then became apparent that if the B.M.A. attempted to conduct the survey alone it would expose itself to legal action by M.M.S. for breach of confidentiality, and the six-hour debate at the last Council meeting served to make the dilemma plain.

This tangled situation should not be allowed to obscure the matter of real concern to ordinary general practitioners, nor would it be wise to let it drag on indefinitely. The survey, the M.M.S. scheme, and all the debates can be resolved into one question. Some doctors pay their wives notional salaries because there is no apparent advantage in paying them more. If these wives were paid at a higher rate would this lead in the end to a real financial benefit for general practitioners? This is what the Representative Body will want to know.

Vocational Aim

At the heart of the clinical practice in which the great majority of doctors make their working life is the care of individual men and women. This gives a sense of value to their work and of purpose to their education. In their undergraduate years medical students are perhaps more fortunate than some of their contemporaries, for part of the dissatisfaction at present being expressed in universities is said to spring from a feeling of aimlessness. Certainly some faculties seem to produce graduates equipped for little else than to give a plausible reply in a sociological discussion on television. But is medical education clearly focused on producing the sort of doctors the patients need?

A bone of contention for some time has been the amount and type of training that undergraduate students should receive to fit them for a career in general practice. Until recently men were living who began their medical career by apprenticeship to a general practitioner, an era ended by the General Medical Council in the nineteenth century. There followed a period up to the end of the second world war when undergraduate education became almost exclusively carried out by consultants in hospitals. The pendulum then swung back again, given a push in 1950 by the report of a B.M.A. committee under Sir Henry Cohen, as he then was, and continued on its way under the impact of valuable individual studies and the advocacy of the Royal College of General Practitioners for a more realistic education. Consequently the recent report of the Royal Commission on Medical Education can write without fear of challenge, "We think that every undergraduate medical student should be given an insight into general practice." The educational experience proposed is not to train the student specifically for general practice but to show him how the problems that confront the family doctor are a part of medicine as a whole. In other words, real medicine does not begin and end at the hospital gates.

Graduating with a more complete idea of what medicine is about than their predecessors have often done, many of these young doctors could be expected to welcome vocational training for general practice. This was the subject of a conference held at the Royal College of General Practitioners on 5 June, on which a report appears at page 758. Several schemes already in operation were discussed, but the need to get more of them past the planning stage was evident from the observation of Dr. J. Horder, chairman of the R.C.G.P.'s vocational training subcommittee, that at present only one in eight doctors are entering general practice through vocational training. No one doubted the need for it to be extended.

But questions remain to be answered, and indeed they attend the Royal Commission's report also. Have we the resources in men, money, buildings? Men of initiative acting locally and with few facilities have already done much to encourage postgraduate and continuing education for doctors in practice. Practical enthusiasm is there, and many people would agree with Lord Platt, who told the conference that it is urgent to get on with vocational training without worrying too much about the relative responsibilities of different organizations or exactly where the money is to come from. But, short of making vocational training compulsory, many entrants to general practice are likely to fight shy of it when they can enter practice without it and earn two or three times as much. Thus like other desirable educational reforms the scheme will cost money, and not for the first time the nation will have to be made aware of the real costs of having a first-class medical service.

The Postoperative Chest

Postoperative chest complications have always been the bane of surgery, and they have been studied repeatedly by both surgeons and anaesthetists. Many reports on them have therefore accumulated, and the latest addition, by J. A. K. Wightman, may in time come to be regarded as a classic.

He studied 785 patients who had general surgical operations under general anaesthesia. The definition of what is a chest complication is clearly important, for the size of the fish caught will depend on the mesh of the net. Wightman takes a postoperative pulmonary complication to be present if there is a productive cough, a fever of 99° F. (37.2° C.) or over, with physical signs in the chest which were not present before. His sad but not unexpected conclusion is that the incidence of this complication has changed little during the past 30 years. He confirms once again that the site of operation is all-important, for though the total incidence of cases with chest complications after operation was 5% the abdominal cases accounted for 10% and the non-abdominal cases for only 0.6%. Even among the abdominal cases the site of operation influenced the outcome, for the incidence rose steeply to 21% when the operation was on the gastroduodenal and biliary tract and was 18% for bladder and prostate operations, but was only 6% for other abdominal operations. In his careful analysis various other factors are brought out, and these tend on the whole to confirm what previous inver-
Tigators have shown. The incidence was higher after emergency than after elective operations, particularly when gastrointestinal bleeding had occurred. Cigarette smoking and pre-existing respiratory disease were associated with a high incidence. But age, strikingly enough, did not seem to be important apart from the association between age and chronic respiratory disease. The duration of operation, the existence of wound infection, and obesity did not seem to increase the incidence of this complication, though there is some doubt about the validity of that. Apart from site of operation the onset of postoperative chest complications was most clearly related to pre-existing chronic bronchitis.

During the last 30 years or so there has been a gradual change in emphasis on the factors considered to cause these complications. Such things as the anaesthetic and its technical details have given way to the site of operation and pre-existing respiratory disease. Few would now maintain that the exact nature of the inhalation anaesthetic or the exact mode by which it is administered to the patient is more than a minor factor in the production of chest complications, apart from such obvious causes of trouble as inhalation of stomach contents or gross trauma to the respiratory tract. Wightman thinks that the reason why the advantages of the past 30 years in chemotherapy and antibiotics, and in anaesthetic and surgical techniques, appear to have had so little effect on the overall incidence of pulmonary complications is that patients are now operated on who would formerly have been rejected on grounds of age or chronic respiratory or other disease.

It is unfortunate that in spite of all we now know about the causes of postoperative chest complications so little is done to minimize the likelihood of their occurrence. All too few patients in the average general hospital who are to have major abdominal operations are carefully examined either by an anaesthetist, or by a physician, long enough before their operation both to detect and to treat chronic respiratory disease. Most of them are probably admitted within hours, or at the most a day, of the operation. The general assessment of the patient's health is likely to be left to a junior medical officer, and there is no time to institute more than token therapeutic measures. If these do not cure chronic respiratory disease they might, if properly applied, have had sufficient effect to influence the incidence and severity of any postoperative chest infection. If all patients over the age of 60 for abdominal surgery were admitted five or six days before operation so that smoking could be cut down or stopped, and so that they could be given, when necessary, corticosteroids, bronchodilators, antibiotics, or other medicinal treatment, and physiotherapy and breathing exercises, and if there was time for a chest x-ray, electrocardiography, and simple respiratory function tests, the risk of chest infection might be much reduced. At the very least the prognosis would be clarified. Suggestions of this sort are usually countered by the objection that bed use per patient would be increased. But a real benefit might come in a lowered incidence of chest complications and a more rapid return of the patient to normal life. Wightman's study is valuable in exposing once again how unsatisfactory are our measures to prevent postoperative chest complications, particularly after abdominal surgery. Improvement will come only from the widespread adoption of already well-known therapeutic measures. They deserve close attention from surgeons and anaesthetists.


**Tests for Kidney Transplantation**

Recent reports in the lay press that a hospital worker had protested against radiological examinations being performed on a potential kidney donor has caused some anxiety within the profession and among the general public. It is therefore helpful to know something about these procedures, which vary in different centres.

If a kidney is to be transplanted from a live donor it is of the utmost importance to determine that the donor has two normally functioning kidneys and that the anatomy of the renal arteries is suitable for anastomosis with those in the recipient. Routine investigation of the urine, intravenous pyelography, and aortography are therefore performed, together with analysis of serum electrolytes, urea, and creatinine clearance.

Assessment of compatibility between donor and recipient involves antigens of both red and white blood cells. If the principles that apply to blood transfusion are violated in kidney transplantation immediate initial failure of the transplant is likely. A recipient with AB blood group can have a kidney transplanted from a donor of any red-cell group, and a group O donor could give a kidney to any recipient, but A or B red-cell antigens should not be present in the donor if they are absent in the recipient. A and B red-cell antigens are present in many tissue cells and particularly vascular endothelium. If the recipient has preformed antibodies against these antigens, severe irreversible damage to the kidney graft can follow. In practice the other red-cell antigens, including the rhesus, can probably be ignored.

Methods of tissue typing to match donor with recipient are now becoming available. The most promising entails the testing of lymphocytes of donor and recipient against a panel of sera containing white-cell antibodies. The patterns of reactivity against given antisera are compared between donor and recipient. At the present time these tests leave much to be desired, for good results can occur despite undoubted incompatibilities, and vice versa. But there would seem to be every reason to believe that advances will soon be made in this technique.

Some patients as a result of multiple pregnancies, multiple blood transfusions, or a previous rejected transplant, develop serum antibodies which could cause immediate failure of a subsequent transplant. It is important that the serum of the recipient is tested for such antibodies, preferably against the lymphocytes of the donor—a process analogous to cross-matching with blood transfusions.

These tests of compatibility merely involve removal of a few millilitres of blood from donor and recipient. When organs are to be transplanted from cadavers it is desirable to have as much information on the donor as possible—for example, in cases of kidney transplantation, results of culture and examination of the urine, urinary output, and blood pressure before death. But there is absolutely no reason why dying patients should be subjected to any procedures that could cause objection. In fact there would appear to be every reason for scrupulous avoidance of any interference with the donor that is not for his own benefit.

The tests referred to here would not fall into this category but be part of the normal examination of the patient. The radiological investigations carried out on living donors are not needed when the kidney is to come from a cadaver, since any anatomical abnormalities in the kidneys will be noted when they are removed and unsuitable kidneys will obviously not be transplanted.