Procedure in Hospital

Transfusions.—Transfusions must be begun as soon as possible. There should be at least six medical officers prepared to start them, and even then all cases may not be dealt with for over an hour. Transfusions on shocked patients are often very difficult, and the assistance of doctors practised in intravenous work is essential. Junior residents will not infrequently be unable to locate a vein through the skin, and cutting down should be done as a routine unless a highly skilled practitioner is present. Completely equipped trolleys, proper lighting, and adequate support for the arm must be provided in each case. We have found cannulae easier to work with than the needle supplied with the Government equipment.

Blood Pressure.—It is of the utmost importance that regular blood-pressure and pulse readings should be kept. One person should be made responsible for this or readings may be missed. The blood-pressure reading has proved the best guide to the patient's condition. An additional supply of sphygmomanometer cuffs that may be left on the patient's arm saves much trouble.

Operation List.—The preparation of an operation list is important and difficult. It cannot be done at once. All that can be achieved until the effects of treatment are noted is the classification of cases as "early," "for resuscitation," or "when convenient." The condition of the patients must be constantly reviewed by someone in close touch with the theatre, preferably a senior surgeon. This is perhaps the most responsible work of all, since so much depends on operating at the optimum time. It should be noted that operations on Group II cases cannot as a rule begin before three to four hours, and that they are often long and tedious. Unless some of the Group IV cases are taken to the theatre early they may not be operated on until as long as twelve hours after their injury. This must increase the danger of infection.

Clerical Staff.—In our hospital two clerks are on duty in the reception ward and take down full particulars of each case for the E.M.S. forms in a hospital casualty record book. Each case is numbered, and clothes and valuables labelled and recorded and placed in a safe. The E.M.S. forms are filled in later from the record book. In this way all information is quickly and permanently available. Further requirements in connexion with the reception ward are: (1) emergency lighting that is independent of the electric mains; (2) a good supply of hot-water bottles (in case of electricity failure); (3) the temperature of the ward must be kept over 70° F.; (4) provision of a portable *x*-ray apparatus; (5) avoidance of overcrowding—only those actively engaged should be allowed in the ward; (6) plenty of hot drinks should be available.

Staffing.—A casualty clearing station must be prepared to treat a large number of casualties at all hours of the day or night with no warning. At the same time, in view of the long periods of inactivity, too many members of the staff must not be interned in the hospital and condemned to idleness and boredom. The classification above shows that there are a very few cases which need urgent operation, a larger number which need resuscitation before operation, and many which need operation sooner or later. Two surgeons on the premises are quite sufficient—one to operate at once if necessary, the other to undertake the difficult task of sorting. Two more surgeons should be on call, one of whom should be within twenty minutes' journey in a car—i.e., he could be fetched in forty minutes in the event of a telephone breakdown. Since nearly half of all operations have been orthopaedic it would be desirable that two of the four surgeons should have had orthopaedic experience. It is essential that one orthopaedic surgeon should be attached to the hospital.

Four operating tables worked simultaneously have been necessary to deal quickly with the larger groups of casualties received. A house-surgeon is required for each, and preferably an anaesthetist for each, although an experienced anaesthetist can supervise two cases simultaneously with a student or nurse to hold the head. One physician must always be on duty. There have been many cases on which a physician's opinion has been indispensable. One of his principal duties is assessing the response to treatment in a shocked case.

Operating Theatres.—Four operating tables are necessary—two in each of two theatres, so that an anaesthetist can supervise two cases. It has not been found necessary to keep trolleys constantly laid out. As soon as casualties are expected instruments are put in the sterilizers and are ready in good time for the early cases. Steam is used for sterilizing, since it is independent of outside power or gas, and can only be put out of action by a direct hit.

Wards.—It has been found to be useful to distribute the casualties after treatment among several wards rather than fill one ward. This lessens the strain on the nursing staff and appears to have no disadvantages. Extra nurses are drafted to the wards according to the numbers admitted. Some additional equipment is required, notably electric cradles and dressing instruments.

The above is a brief report of air-raid casualty work as experienced in our hospital. Various points arising from our experience are mentioned in the hope that they may be of use to others. The experiences of other hospitals would give us much useful information which would improve our organization, and I hope other medical officers will write up their work.

My thanks are due to Mr. C. H. Gray for advice and encouragement, and to Mr. G. Quist for assistance in the classification of casualties.

Nova et Vetera

CENTENARY OF THE PHARMACEUTICAL SOCIETY

The history of the Pharmaceutical Society of Great Britain provides a good example of the value of the union of men whose work in life lies along the same lines and whose duties to the State can be best done when they admit allegiance to a central authority of their own free choice and serve a common cause. A hundred years ago there were many practitioners of pharmacy well equipped by training and knowledge of drugs to make galenical preparations and dispense prescriptions; for it is absurd to suppose that between the highest grade of druggists as represented by William Allen, F.R.S., and the lowest grade as represented by those who added to their occupation the sale of "mops, brooms, bacon, butter, and a thousand articles beside," there was not a large intermediate class of capable dispensers, including a goodly number of apothecaries who preferred shop life to professional life, and the assistants who had been trained by them. Be that as it may, there was no sort of unity among the drug dealers of those days and no means, and little inclination, for the exchange of views and the sharing of experiences, by way of social contact. One interest they all had in common, and that was poaching on the preserves of the physicians, for counter-prescribing was a practice which the Apothecaries Act, 1815, had failed to suppress. It was from this common interest that the bond was woven which eventually united the druggists into a society of their own. It is an old story and need only be told in the briefest outline.

The Father of the Society

In the early part of 1841 a Mr. Hawes introduced in the House of Commons a Bill which sought to make it an offence for any person who was not a qualified doctor to recommend any medicine for the sake of gain. So strongly was this proposal resented by druggists, high and low, that they joined forces to oppose it. The opposition was successful, and on the flood tide of success a few leaders of pharmacy launched a scheme for establishing a permanent organization. A meeting was convened at the Crown and Anchor Tavern in the Strand, and on April 15, 1841, close on the heels of the withdrawal of the Hawes Bill, it was resolved, on the motion of William Allen, seconded by John Bell, "That for the purpose of protecting the permanent interests, and increasing the respectability of chemists and druggists, an Association be

now formed under the title 'Pharmaceutical Society of Great Britain'." Having regard to the high scientific attainments of William Allen, the first president, it is not surprising that plans for establishing a system of education for druggists were started immediately. Allen was a Fellow of the Royal Society who carried on business as a chemist and druggist in Plough Court, Lombard Street; in 1796 he had formed, with several other young men, the Askesian Society for practical scientific research, and three years later he had helped to found the British Mineralogical Society; in 1804 he delivered a course of lectures on natural philosophy at the Royal Institution, and he was for a time lecturer on chemistry and natural philosophy at Guy's Hospital. With such a man as its president there is little wonder that the infant society became imbued with his belief in the value of scientific education and turned to it as a means of raising the practice of pharmacy from the low level at which it stood in those days, so far as the rank and file of the calling were concerned. The wisdom of the Society's first council was soon to be seen, for by the time the organization was two years old Queen Victoria granted it a Royal Charter of Incorporation in which it was declared that the purpose of the Society was the advancement of chemistry and pharmacy and the promotion of a uniform system of education.

Medical Collaboration

As has been seen, the direct cause of the establishment of the Pharmaceutical Society at that particular date was the enmity which the ambitions of the physicians had aroused among the druggists. If the hatchet was now buried it was no doubt because the physicians saw clear evidence that the united druggists were making earnest efforts to improve the country's pharmaceutical service and so produce a class of men on whom reliance could be placed for sound drugs and accurate compounding. Already the effect of this was seen in 1849, for in that year we find the Provincial Medical and Surgical Association, the forerunner of the British Medical Association, in collaboration with the council of the Pharmaceutical Society concerning the parliamentary measure which was to become the Arsenic Act. The first Pharmacy Act (1852) was, in fact, largely the outcome of their collaboration, for one of the proposals made by a joint committee of the two bodies was that the sale of arsenic by retail should be reserved to medical men and chemists and druggists. This proposal could not be adopted by the Legislature because there was at that time no legal definition of the term "chemist and druggist," a fact which was made so clear to members of Parliament during the passage of the Arsenic Act that steps were soon taken to prepare one. Since then the British Medical Association and the Pharmaceutical Society have been in contact at many points: in more recent times there were, for instance, discussions arising out of National Insurance legislation in 1911, the Dangerous Drugs Act in 1920, the Select Committee on Medicine Stamp Duty, 1914, the Poisons Board, 1934, the Medicines and Surgical Appliances Advertisement Bill, 1935–6, and in 1938 the discussions regarding the differentiation between valuable and other medicines advertised only to the medical profession.

The centenary of a society is no small matter. To weather the storms of a hundred years needs not only stamina but good intentions well carried out. The Pharmaceutical Society began with the intention of raising the standard of pharmacy by educating those who practised it; a hundred years on we find the descendants of William Allen and his colleagues still carrying on the good work and the School of Pharmacy an integral part of the University of London. By encouraging and subsidizing research in the fields of pharmacy and sciences allied to it the Pharmaceutical Society has made great gifts to medicine.

For the past sixteen years Dr. Mazyek P. Ravenel has edited the *American Journal of Public Health*, which during his direction has achieved an unrivalled position in public health literature. The January issue commemorates the appointment of Dr. Ravenel as editor emeritus, and contains appreciations of his work from different men distinguished in public health services and a bibliography of his writings from 1891 to the present date.

DOCTORS HARD HIT BY THE WAR

HELP FROM MEDICAL RELIEF FUND

He was decorated for gallantry in the last war; and when an incendiary bomb set fire to his house some months ago, destroying his furniture, clothes, books, instruments, spare cash, and other possessions, Dr. A could "take it," though the financial consequences were very serious. He is a general practitioner who has been carrying on under difficulties in a much-raided district from which many of his patients have departed. He bought the practice only a few years ago. His bank, which provided the necessary capital, holds his investments as security for the loan. He has found that rent, rates, taxes, bank interest, insurance premiums, and other expenses, professional and domestic, absorb almost the whole of his diminished wartime income. But Dr. A has been carrying on, paying his way.

When the bomb fell Dr. A was determined to continue carrying on. But how to continue paying his way? There were vague reports in the Press about a proposed Government Bill to provide compensation for air-raid damage. At some remote date Dr. A might perhaps be able to recover at least part of his loss. Meantime he had to pay for board and lodging for himself and his wife. And he urgently needed new clothes, new instruments, and a second-hand car.

Fortunately for Dr. A, the Medical War Relief Fund had recently been established. He seemed just the sort of man, involved in wartime misfortune through no fault of his own, that the Fund was designed to help. He was granted a substantial gift of money to provide for immediate needs, and in addition a loan which he is expected to repay, without interest, when he is in a position to do so. The Fund has received from him the following letter: "I am overwhelmed with gratitude and cannot express to your Committee the heartfelt thanks I wish to offer them. My case is probably typical of many others, but I have never been dealt with so kindly in all my life. I will now be able to buy some clothes, and I shall use the money to the very best advantage. I am enclosing a separate letter accepting your loan, free of interest, and I undertake to pay it back when I receive my next panel cheque. I may at some time probably be able to let you have the whole of this amount back, when more peaceful times arrive. For the moment I cannot say more than 'Thank you.' Your gift has cheered me up tremendously."

Dr. B is a comparatively young man who practises as a specialist. It was a high-explosive bomb that came his way, seriously damaging his house and wrecking his garage. His private practice has largely vanished. His children are at boarding schools and his educational expenses are heavy. He has a few National Savings Certificates, but most of his savings have been invested in life insurance policies. In acknowledging a loan from the Medical War Relief Fund Dr. B wrote: "I feel that my colleagues have come to my rescue in a noble manner, and the keen edge of anxiety is removed. I shall of course repay the loan when I am in a position to do so."

Dr. C is a man of advanced age with a small practice and correspondingly modest expenses. His income has been reduced owing to loss of patients through evacuation, while his expenses have temporarily increased as a result of his house having been seriously damaged by enemy action. This exceptional expenditure presented a difficult problem to a man of slender means who was just making ends meet. The Medical War Relief Fund has solved the problem with a gift which will tide Dr. C over the emergency.

Dr. D is a general practitioner in middle age. He has been handicapped by health troubles, but in the years immediately preceding the war his professional income increased steadily, and although his house was heavily mortgaged his financial affairs were not such as to cause alarm. He is a veteran of the last war, and in his circumstances many a man would have been content in September, 1939, to consolidate further his position in civilian practice, leaving the uniform of the R.A.M.C. to the younger generation. Not so Dr. D. He served in France, but after Dunkirk he was obliged to relinquish his commission on the ground of ill-health. Meantime the income from his practice had diminished, and there was an awkward interval between the date when his Army pay