

THE VALUE OF THE PHARMACIST TO THE HOSPITAL.*

BY OLIVER W. YOUNG.¹

It is probably easy to say what the theoretical value of the pharmacist would be to hospitals in general, but in practice his value at present is dependent upon the hospital. Various types and sizes of hospitals would necessarily require different qualifications. Some hospitals would restrict him entirely to the handling of drugs and galenicals while others would allow him full sway. We may say in general, the smaller the hospital, the more versatile he would need to be, while the larger the hospital, the more routine his work would become. Of course, in the latter case there is the exception of the head pharmacists whose work would naturally be executive in type and who would have to have requirements beyond those of the average graduate pharmacist.

Theoretically, the pharmaceutical graduate from most of our schools of pharmacy should be capable of taking care of or supervising the handling of the following duties if he is to be of real value to most institutions which are large enough to engage the services of a pharmacist. He would be required to take care of out-patient orders and of ward orders. Most of these would be in the form of prescriptions or of special medicines and, of course, he should experience no difficulty in their preparation.

The preparation of almost all solutions would be rightfully his duty, and here some aspects of the work might be a little different from that to which he is accustomed for some are perhaps unique with hospital work. He would be required to prepare sterile solutions varying in quantity from large volumes of saline and glucose solutions down to two or three drams of a sterile eye preparation. Volumetric solutions and the preparation of bacteriological stains might be a little difficult at first, but he should be able to adapt himself to the intricacies of their preparation with little trouble. He would also be called upon to manufacture galenicals in larger quantities than heretofore. Parenteral solutions in ampul form and special extemporaneous solutions such as extracts of house dust, and solutions for the injection treatment of hernia would be his problem.

The supervision of the purchasing of drugs and pharmaceuticals would be his and possibly even of hospital supplies. In this matter he could easily save the hospital money, for the intelligent purchasing of drugs and pharmaceuticals with respect to reliable materials, turnover and preservation requires some one who is trained in pharmacy. For the same reason he should supervise the storage of biologicals, drugs and pharmaceuticals and even hospital supplies. He should have rigid control over the narcotics and the emergency supplies such as the various emergency trays, toxicological bag, anesthetics, various stimulants, intravenous solutions, ampuls and antidotes. He may possibly even be given the task of supervising the preparation of surgical dressings. He must have charge of maintaining the ward supplies and act in an advisory capacity in the interpretation of orders left on the floors by the doctors for items which fall within his domain. He should be present at the staff meetings and be prepared to answer questions

* Subsection, Hospital Pharmacy, A. Ph. A., New York meeting, 1937.

¹ Pharmacist, Gundersen Clinic, La Crosse, Wisconsin.

concerning his work, be prepared to give information about new drugs such as information concerning dosage, effectiveness and synonymous official medicines if such exist.

Instruction to student nurses in the field of pharmacy and instruction to the interns in prescription writing and in composition would be expected of the hospital pharmacist. He should be prepared to constantly detail the doctors on the official preparations such as the detail men from the various pharmaceutical houses are doing with their own preparations.

All of these duties and possibly a few more which have not been mentioned should come within the jurisdiction of the hospital pharmacist if he is to serve an institution with profit. Unfortunately, however, among all of the hospitals in the country, there are not many whose size will permit the employment of a pharmacist. There are many more, perhaps, who are capable of employing one with profit but who continue to split up such duties among their nurses, technicians and other employees.

Although it is true that much has been accomplished in the past few years through the coöperation of the various hospital associations, the American Medical Association, and the American College of Surgeons, it would be rather too much to expect that these associations should list among their requirements at present the employment of a pharmacist in all of their hospitals. Surely it would be unfair to the small hospital for any one of these associations to require all hospitals to engage the services of a pharmacist and so deprive such small hospitals the benefits attending membership.

The statement has been made, "the greater the demand for the hospital pharmacist, the better qualified the men and women entering this work must be."

It is rather evident that if any real results are to be expected in creating a demand among the smaller hospitals for a pharmacist, an entire reversal of the above statement will be necessary which would then read, the better qualified the men and women entering the field of hospital pharmacy, the greater the demand will be.

The above list of requirements, as numerous as they are, are expected and are taken for granted of the hospital pharmacist, but in order to open the field to a greater degree, it will be necessary to offer even more than this. In the smaller hospitals and in those which are now splitting up his duties among their various employees, it may be possible for a pharmacist to enter hospital service through another branch which may not be strictly in the pharmaceutical field but which would serve as a point of admission.

Once in its employment it would not be so difficult to branch out more into his own line. With the thought in mind that if the graduate had been trained in the field of pure chemistry, physics and bacteriology, rather than trained as he has been in these subjects all with their relation to pharmacy, it might be possible for him to enter hospital work as a technician and afterward expand into his own work. Realizing the value of a man who is not only a pharmacist but who is also qualified to aid the doctor by his ability to do work in the diagnostic laboratory, especially the value of such a man to the small community hospitals, which are rapidly springing up throughout the country, a number of managers of such hospitals in Wisconsin were questioned thus: "Would a pharmacist who has been trained in chemistry,

bacteriology and physics in such a manner that he could also do laboratory work be of any value to a hospital such as yours?"

Every one interrogated was quite enthusiastic. It would seem to the author that men so trained and possessing any business ability at all would make very desirable managers of such hospitals.

Once in close contact with the doctor, such men would easily gain respect by their ability. The answer to this question of gaining recognition among the various associations seems to be to attack the smaller hospital by means of men better suited to their needs rather than by requesting the employment of pharmacists as such. If this can be done, naturally the value of the pharmacist to the hospital would be enhanced.

A MODIFIED 1-2-3 ENEMA.*

BY RAYMOND J. HANSEN.¹

One of the most common methods in the hospital for emptying the colon is the use of an enema. Its action depends largely upon a stimulation, through distention of the lower bowel, (1) however, in an enema containing a dissolved salt, such as magnesium sulfate or sodium chloride, salt action, or osmosis is also present. The most widely used to-day are the normal saline and the soap suds enemata.

At times a more drastic enema than one of plain tap water or normal saline is desired, and as a result, a solution of magnesium sulfate in glycerin and water is commonly used. This enema consists of 1 oz. of magnesium sulfate, 2 oz. of glycerin and 3 oz. of water and is known as the 1-2-3 enema. The magnesium sulfate is first dissolved in the water and then the glycerin is added. Goldsmith and Dayton (2) developed that the colonic mucosa was impermeable to sulfates, while chlorides and other salts passed through the wall into the blood stream, hence, the use of normal saline enemata in kidney disease is contraindicated, while that containing magnesium sulfate will have no appreciable effect. Consequently, an enema containing magnesium sulfate can be used more often than the plain normal saline enema with less chance of being harmful. H. W. Soper (3) recalls that Meltzer found that solutions of sodium sulfate incited contractions of the colon while solutions of magnesium sulfate produced a relaxation and dilatation. Soper suggests the use of sodium sulfate and recognizes the value of the magnesium sulfate enema in post-operative conditions.

With the recent advance in the price of glycerin, the hospital pharmacist was faced with the problem of keeping the amount of glycerin used at a minimum and it became advantageous to find some substitute for glycerin in these 1-2-3 enemata. Hirschman (4) suggests the use of hydrogen peroxide, one part to two parts of warm water. However, in our experience this has proved as costly as glycerin. In concentrated form we know that glycerin has a dehydrating action and is somewhat of a local irritant, however, in a 50% solution or less, it no longer exhibits this action, but rather becomes an emollient (5). As the concentration of glycerin in the 1-2-3 enema is approximately 40%, the action obtained is probably more as an

* Section on Practical Pharmacy and Dispensing, A. P. A., New York meeting, 1937.

¹ Hackley Hospital, Muskegon, Mich.