from the standpoint of surface tension and "foam ability." Salts with tri-isopropanolamine and "mixed isopropanolamines" were semi-solid; all others were solid.

2. "Sulfonated" hydrogenated castor oil was superior to commercial "sulfonated" castor oil as an emulsifying agent. A good 25% oil emulsion was produced with 1.25% of the former while an emulsion with 10% of the latter "broke."

3. "Sulfonated" hydrogenated castor oil was likewise superior to commercial "sulfonated" castor oil for production of cosmetics. A stable cold cream was readily prepared with 0.035% of "sulfonated" hydrogenated castor oil as the sole emulsifying agent. Cold cream prepared with 0.0025% was stable, but required considerable agitation while cooling. Likewise "sulfonated" hydrogenated castor oil was found satisfactory as an emulsifying agent for vanishing creams.

4. Salts of "sulfonated" hydrogenated castor oil were found to be good detergents as compared to "sulfonated" castor oil. The sodium salt was most satisfactory.

LITERATURE CITED.

(1) Fiero, JOUR. A. PH. A., 27, 402 (1938).

THE ABILITY AND OPPORTUNITY OF THE PHARMACIST TO SERVE ALL HOSPITALS, LARGE OR SMALL.*

BY MARY DIENHART.[1]

Hospital pharmacy is becoming an important phase of the pharmaceutical profession. For many years, the larger hospitals have employed one or more full-time pharmacists and they have found it advisable to do so not only to insure the confidence of the physicians on their staff but also that of the patients, and for economic reasons. Due to the size of the hospital and the number of patients under constant care, the services of the pharmacist are necessary to fill the medicinal needs of the patients.

The duties of the pharmacist in any hospital are innumerable but in a large hospital they are carried out on a larger scale and consequently require more of the pharmacist's time. Among these duties may be listed:

1. The preparation of stock materials and the proper storage of them—many preparations may be made by the pharmacist more economically than they can be purchased from the pharmaceutical houses because hospitals have access to tax-free alcohol.
2. The dispensing of narcotic drugs and a perpetual inventory of them.
3. The dispensing of all standard and official preparations as well as the specialties of the manufacturing houses.
4. The preparation and sterilization of parenteral solutions.
5. The sterilization and care of all surgical and parenteral supplies.
6. The purchase of all drugs, chemicals and biologicals and the proper storage of them.

Briefly, the hospital pharmacy should be a department of every hospital in which drugs and medical supplies are purchased, stored and dispensed and in which necessary records are kept.

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[1] Pharmacist, Rockford Hospital, Rockford, Ill.

Smaller hospitals have found it rather difficult to solve their pharmaceutical problem. The duties in the pharmacy itself are not enough to warrant the full-time employment of a registered pharmacist but, at the same time, they feel it advisable to have a pharmacist present at all times so that prompt service may be given. Probably because of economic reasons, they feel that they cannot possibly employ a pharmacist and consequently are forced to purchase their drugs from a nearby prescription shop and perhaps also require the part-time services of a nearby pharmacist. This in itself is hardly economical and hardly renders the prompt service which the physician especially desires for his hospital patients.

This is one reason the higher educational requirements now in effect in Pharmacy are important. The graduate of an accredited college of Pharmacy is not only prepared to serve in his own profession but has the ability to serve in other related professions as well. A registered pharmacist must be a graduate of a four year course in Pharmacy and must have had one or more years of experience.

This four-year course includes the routine academic subjects required of every college graduate besides the subjects in the School of Pharmacy itself and elective courses. This prepares the student of Pharmacy both socially and professionally.

One of the major subjects now included in the pharmaceutical curriculum is Bacteriology. The pharmacy student studies this course almost as extensively as the science student and, by so doing, he is prepared to serve as a laboratory technician. Neither student has had the experience to qualify as a hospital laboratory technician but either student would be capable of doing this work after a little experience was acquired. Blood and urine analyses, section staining, lab chemistry, etc., are studied by the pharmacy student and this phase of Bacteriology is important in the hospital laboratory.

In many universities, radiography is now being offered as an elective course and as the demand for it increases so also will the course. Of necessity, the course has been only a short one and gives the student only a basic knowledge of the subject but there are possibilities of increasing this knowledge by actual experience in an X-ray department. The equipment used, the technique employed, and the positioning of the patient for the X-ray are the primary factors learned while studying the course as it is offered, but the actual experience of handling injured patients must be acquired later. As time goes on, this may be accomplished by the student while he is still attending college but at the present time he must obtain this experience after graduating. This is true of any profession, however, and here again the pharmacist may serve the hospital in another capacity.

The one or two years of actual experience in the drug store required of a pharmacist before he may become registered also prepares him to serve in still another department of the hospital and this is the purchasing department. Hospital supplies, surgical supplies and physicians' office supplies are handled in drug stores and the pharmacist becomes familiar with the purchase of these supplies as well as the purchase of drugs. This experience in the drug store would enable the pharmacist to serve as purchasing agent in the hospital.

In hospitals where training schools are maintained, the pharmacist could teach the courses in Materia Medica. This would relieve a physician of the staff of this task and at the same time still assure thorough teaching of the subject because the pharmacist is capable and can be educated to do this.

This should help solve the problem of the small hospital as far as Pharmacy is concerned. Not every pharmacist has had the training to do all these things but it is possible for the student to plan his college curriculum to include these subjects and thus prepare himself to serve as a hospital pharmacist. If the full-time services of a pharmacist are not required, then the pharmacist could substitute in one of the other departments aforementioned. In several instances, it may be found that a technician is needed to relieve in the laboratory or X-ray departments. The pharmacist could do this relief work and thus do away with the necessity of employing a part-time technician, a part-time pharmacist and the purchase of drugs from a nearby drug store. This would be far more economical and far more satisfactory to the staff as well as to the patient.

Every hospital, large or small, should have the services of a pharmacist at its disposal and it is possible to do so. The pharmacist has the ability to serve all hospitals and the hospital should offer the opportunity. Society now demands good medical care and it should be entitled to efficient pharmacy service as well. If the hospital expects to hold the confidence of the patient, the physician and the staff in general, efficient service must be given and this service should consist of pharmaceutical as well as nursing service.

Pharmacy is now recognized as a medical specialty and shares the responsibility of the various divisions of medical practice. The services of the physician are necessary to the patient of the hospital and likewise the services of the pharmacist are required to prepare the medication prescribed. Medicine and Pharmacy are sister professions. The physician, the pharmacist and the hospital should keep them as such, the physician by insisting that the hospital employ a pharmacist to fulfil the medicinal needs of the patient; the pharmacist by preparing himself to serve all hospitals; and the hospital by endeavoring to safeguard the prescribing, dispensing and administering of the care and medications needed to preserve the welfare and health of humanity. The medical, pharmaceutical and nursing professions must all be well represented in order that the hospital may accomplish this feat.

THE THERAPEUTICS COMMITTEE OF A HOSPITAL.*

BY BERNARD FANTUS.[1]

Correct technique means employing the best method to secure a certain result. Its study is the proper subject of technology; and medical technology should include the determination of how to obtain, under certain conditions, the best results from treatment so far as efficiency, expediency, pleasantness and economy are concerned:

As long as physicians fought disease single-handed and under the unfavorable conditions of the "horse and buggy doctor," they made use of whatever means they had to achieve their purpose and the ability to improvise for emergencies was their great accomplishment.

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[1] Director of Therapeutics, Cook County Hospital; Professor of Therapeutics, University of Illinois, College of Medicine, Chicago, Ill.