I have made many experiments with antiseptic preparations and one of the very best is Dobell's Solution, N. F. A culture from germs found in the mouth is excellent to test the value of an antiseptic; the growth in such a culture was stopped by half its quantity Dobell's Solution. It requires equal parts of the Antiseptic Solution after above formula, double the quantity of the culture of the Antiseptic Solution of the National Formulary, but only equal parts of the Antiseptic Solution U. S. P. VIII. The Alkaline Antiseptic Solution is considerably less effective as an antiseptic, but is effective as a cleanser.

HARTFORD, CONN., JULY 1922.

THE HOSPITAL PHARMACY.*

BY W. H. FORD.

The Pharmacy at Lakeside Hospital is one of its busiest units. We have developed it during the past few years into a producing pharmacy, rather than a distributing depot for popular pharmaceuticals. The School of Pharmacy is now taking up much of this work and during the next year will not only give to their student-body real experience in quantity production of medicinal preparations, but give to the hospital a better quality and standard of supplies at a reduced cost.

The work of producing for the various wards and services, their medical supplies, is a real work requiring the strictest attention; comprising as it does a daily average of 250 patients, it really represents the demands on a retail drug store of 250 families.

The morning work is devoted to filling requisitions from wards and operating rooms. Requisitions coming to the pharmacy must have been passed by the supervisor of nurses, and assistant director—no goods are furnished without their O. K. Requisitions are made in duplicate, original is retained by the pharmacist and duplicate returned with goods to be checked by the nurse receiving on the ward.

Narcotics are furnished in quantities of 25 tablets, pills, etc., only. Each 25 tablets or pills is accompanied by a slip containing spaces for 25 entries. Entries on the slip must be made by nurse administering, time given, name of patient, name of nurse and medical service. No further supplies are furnished until this slip is returned to the pharmacy, signed by the head nurse in charge of the ward, with each tablet or pill accounted for. Each slip is numbered as sent out and a record is kept allowing us to tell in a few moments the narcotics on any given ward, and also simplifies stock keeping.

The hospital management has coöperated with the pharmacy in reducing to the minimum the prescribing and use of liquors in the hospital. Although a nominally 300-bed hospital our request and Government permit allows us 10 gallons of whisky and 5 gallons each of port and sherry wine every 3 months. This amount has never been exceeded and the use has fallen to such an extent that during the month of July just past, the total amount of stimulants furnished all the wards was 1080 cc of whisky and 250 cc of port wine. These were used almost

^{*} Section on Practical Pharmacy and Dispensing, A. Ph. A., Cleveland meeting, 1922.

exclusively by donors for blood transfusion. Control is gained by the same method used with narcotics. The Government allowance of 8 ounces covering a period of 10 days works very nicely for a private ward, but in an open ward with 20 or 30 patients it might bring several bottles to the ward at the same time which would make accurate checking impossible. We therefore furnish 250 cc to each ward with slip attached. The visiting physician records the orders on the ward register for the patients' requirements each 24 hours. No further supplies are furnished until this slip is returned with record of amount and time given, name of patient and nurse giving.

Preparation of solutions for sterilizing is a daily duty. Saline Solution is prepared in large quantities in a specially designed machine. All solutions for hypodermic and local anesthetic use are put up in ounce bottles, cloth capped and marked with special ink, which changes color on passing through the autoclave, providing a perfect check.

Dakin's Solution, which at times is used in large quantities, is freshly made daily; any remaining on wards the following morning is returned for new supply.

All photographic solutions used in the X-ray, pathological and cardiographic laboratories are made in the pharmacy.

Our force consists of a chief pharmacist, an assistant pharmacist and helper. We have no resident pharmacist. Emergency supplies are always available to hospital supervisors. The School of Pharmacy is also supplying students for hospital assistants during the school year. This gives the student not only real hospital experience but an experience in dispensing not to be gained in the average drug store.

Our out-patient department, or dispensary, is cared for each afternoon from 2 to 6 P.M. by the pharmacy force. It is a place of real action as it is the largest in the city. During the past year we had 106,000 visitors; 60 per cent. of this number were medical cases and given medicine.

Our Formulary contains 93 formulas; about 50 of these are used daily and are kept prepared for immediate dispensing. Visiting physicians are not restricted to this list of formulas so that hundreds of prescriptions covering all phases of pharmacy are offered. The compounding and preparing of these articles is a work and schooling in itself and is of the very greatest value to the aspiring pharmacist.

Although hundreds of prescriptions are furnished free to deserving patients, and range of prices is merely nominal, our ability to produce the majority of these medicines in our own work rooms makes the drug department of the dispensary an asset. .

Night clinics held on three evenings each week are devoted to skin and venereal diseases only and are cared for, in the drug line, by the pharmacist.

Drug purchases at Lakeside include also surgical instruments and supplies are under the direct supervision of the chief pharmacist; orders are placed by him through the hospital council or directly with producers. The budget system prevails. The pharmacist makes his estimates for yearly expenses and expenditures and his standing is reported monthly by the auditor. Drugs and supplies in dispensary service are all furnished through the pharmacy and charged to it as a separate unit. Requisitions for surgical instruments and supplies for operating

rooms and wards are priced each month by the chief pharmacist and passed to the auditor's office.

The position of pharmacist in a modern hospital should appeal to many young men. The field is enlarging each year and although he may never have his name emblazoned over the door of an emporium with a window full of hair nets, boxing gloves, etc., with a few drugs concealed in "Our Prescription Department," he will have the satisfaction (and really this is all we get out of life) of offering to real suffering humanity the benefit of his learning and experience. As hospital pharmacist he is brought into daily touch with the best surgeons and doctors; he is relied upon to answer innumerable questions relating to his profession from interns and nurses. He has access to experimental laboratories, is able to test either chemically or physiologically any new remedy or old ones for value or strength.

I deem a word of appreciation for Dean Edward Spease of the Cleveland School of Pharmacy in order for his labor in bringing to the front this phase of pharmacy. During the past year he has produced a working condition in the school of the greatest benefit to all Cleveland hospitals. In the near future he will not only furnish finished supplies but help to all hospitals from the school and student body.

In Dr. A. R. Warner, formerly superintendent of Lakeside Hospital, but now secretary of the National Hospital Association, we have an active exponent and friend of our cause. Although until recently he has considered that the hospital pharmacist should be affiliated with the hospital association, a recent conversation with him gave assurance of his belief that the American Pharmaceutical Association is its rightful home.

I am hopeful that this brief paper may open the minds of some to the advantages of hospital pharmacy. It is anything but a disagreeable proposition and to-day offers many inducements; it is not discouraging from a financial standpoint if a man is ready for good hard work.

There is not a hospital pharmacist to-day, competent to demonstrate to the management of that hospital the possibilities of his position, who cannot secure the support of the management and persuade it to work, as they do at Lakeside Hospital, heart and soul with the pharmacist as long as he shows himself a real producer.

BUYING FOR THE HOSPITAL PHARMACY.*

BY FRANCIS M. GREENWALT.1

Buying for the hospital pharmacy is a subject about which one might write much and still say little that would be of help to a buyer for some other hospital. As in buying for any other commercial business we are always learning something that makes us more valuable to the employing institution.

The first thing to realize is that we are not infallible and can make some unwise purchases. I have been buying for one hospital for more than three years

^{*} Read before Section on Practical Pharmacy and Dispensing, A. Ph. A., Cleveland meeting, 1922.

¹ St. Luke's Hospital, St. Paul, Minn.