

SYMPOSIUM ON PRACTICING PROFESSIONAL PHARMACY.*

HOW HOSPITALS CAN PROFIT BY ADOPTING A FORMULARY AND CHART AND ENGAGING THE SERVICES OF A REGISTERED PHARMACIST.

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There are generally four types of Hospitals.

1st—Municipal.

2nd—Those partly supported by municipal appropriations.

3rd—Incorporated institutions financed by endowments, by religious or civic organizations, or by individual support.

4th—Private Hospitals.

The second and third types are greater in number as they embrace all hospitals operating under the auspices of religious and civic organizations. Even in large cities where there are City Hospitals, there are usually a number of these privately or semi-privately operated hospitals, which as a whole, render far more service than the city institutions.

To install a pharmacy or a pharmaceutical laboratory in a hospital where none has operated, it first becomes necessary to persuade the governing body that it will save the institution money. This is preferably accomplished through the Superintendent or Medical Director or whoever may be the directing head. The plan should be referred to the Medical Staff and a committee appointed, representing all departments of the hospital and including a trained pharmacist. A competent pharmacist, through his familiarity with official medicines and official titles and costs of drugs, can be of much assistance in preparing a suitable Formulary and in advising upon the available standard medicines and their price in comparison with the many specialities. The pharmacist necessarily must be conversant with medical terms, action of drugs, types of medication and, principally, comparative costs of proprietary and official preparations. He must drive home the point that all standards for drugs and medicines are defined in the U. S. P. and N. F., and manufacturing firms have only one recourse and that is to buy their supplies through the same sources that pharmacists do, hence fancy names naturally command fancy prices. To put into effect the prescribing for U. S. P. and N. F. drugs and preparations in lieu of proprietaries, a Hospital Formulary and Chart are needed to properly carry out the plan, since without them the staff has no guidance.

To win the support of the Medical Staff, first of all, their pharmaceutical wants and needs should be taken into consideration as they generally have some pet formulas. Then the thought of teaching the internes the art of prescribing is the next feature. This we know is one of the duties of the staff in rounding out the experience and practice that internes must necessarily obtain in hospitals. Most State Boards demand at least one year of rotating service in a Class "A" Hospital as a requisite before taking state examinations and the Formulary in turn also aids as a course in *Materia Medica* and the allied subjects that they are examined in. Hospital Staffs are just as zealous of the records of their internes taking state examinations as are our Schools of Pharmacy. The Staffs of hospitals watch more closely the results of state examinations regarding their internes than they do the schools from which they graduate.

The Hospital Formulary should be published in a practical manner in order that it can be readily referred to.

In addition to the printed Formulary, the formulas are also printed on a chart. This is put up in all wards, clinics, and at each floor supervisor's station, and can readily be referred to by those on service, should they be without their Formulary, which is of pocket size. As a matter of fact, the charts are referred to more frequently than are the books. The books are generally perused leisurely at the office of the practitioner or by the internes during rest periods. This also encourages the practitioner to prescribe U. S. P. and N. F. preparations in his regular practice and is far reaching in its influence. As for the interne, it is the means of educating him to prescribe other than proprietary preparations and when he opens his office, he is not so likely to write for the many specialties which are ordinarily found on his prescriptions.

* See page 1021, October JOURNAL, and page 1279, December issue.

The nurse, also profits immensely by knowing the chart as it affords her the opportunity to study the medicinal terms and greatly aids her with her *materia medica*.

Most hospitals to-day are endeavoring to make each department carry itself from a standpoint of costs, and it is a known fact that the Pathology department and the X-ray department show a profit often in sufficient amount to carry their clinics.

The drug department at the North Hudson Hospital also provides an income, for as each patient is billed for a laboratory charge (this work is compulsory by a ruling of the American College of Surgeons in order to attain a class "A" rating) and for X-ray work, if the same is necessary, so are they billed for medication, whether they be ward or private patient. If ward patients—at a minimum charge, just sufficient in amount to cover costs, if private—at usual prescription rates. Of course if a flat rate is given for ward patients, including all costs, nevertheless, the work done in the pharmacy is billed to the office and the pharmacy credited, just as they bill and receive credit for private work. At the North Hudson Hospital prescriptions are billed for both ward and private patients under one listing. In order that this may be properly summed up, the important facts are as follows: this Hospital, a general hospital of 160 beds, 2 operating rooms, doing all types of work (except handling contagious diseases), has day and night ambulance service and 11 different types of clinics, and giving medical and surgical service. The pharmacy only handles drugs and medicines. The control of gauze, cotton, etc., is under another department, whereas, some hospitals include these with their drug department. All chemicals, pharmaceuticals, drugs, etc., such as disinfectants, etc., are charged to the institution as a whole, whether it be a general laxative or anything else—at cost price.

For comparative purposes, the records of 1931-1932 speak for themselves:

	1931.	1932.	Increase.
Prescription Account	\$4050.69	\$5133.65	\$1082.96
House Account	3847.15	3714.66	—132.49
	<u>\$7897.84</u>	<u>\$8848.31</u>	<u>\$ 950.47</u>

You will note that the House Account was slightly less in 1932 than in 1931 and this was, principally, because prices were lower as the amount of materials used was greater in quantity. The largest items in the House Account are principally for disinfectants and germicidal agents such as Liquor Cresolis Compositus, Liquor Soda Chlorinata and Liquor Formaldehyde, etc., for washing floors, etc.

Bearing in mind the fact that costs were much higher in 1931 than 1932, the above figures prove that the Staff favors this service more than ever and appreciates the fact that U. S. P. and N. F. preparations meet all medical needs because there are no "patents" or "proprietary" whatsoever in our drug department.

This year to date, notwithstanding the times and costs, the Drug Department is showing even a greater income. Of course, the wards are overflowing and private rooms are now usually occupied by ward patients at ward rates, which also means medication at cost.

The cost of installing our Pharmacy fully equipped, which replaces our former drug room, was accomplished at a cost of less than \$900. This includes everything—carpenter work for making of the counter, drawers, shelves and closets, plumbing work of replacing a small sink with a large deep sink with a single unit for hot and cold water faucet with foot control, large enough to wash and clean five-gallon containers, electrical work of installing 4 outlets for lights and gas connections for 2 burners. The balance was spent on utensils, bottles, jars, spatulas, scales, weights, mortars and pestles, pill machine, graduates, etc. The stock bottles for galenicals, etc., costs were nil because these were collected over a period of time and we painted the names and numbers on them with white enamel which permits washing and keeps for about three to four years, even under constant usage. This not only kept down the costs but is also far more satisfactory than paper labels, and superior to glass labels, which crack and break. These containers can be readily washed and kept cleaner, and the labels are more durable. When I say fully equipped, I mean just that, since this figure includes stock of galenicals, chemicals, drugs, etc., for about four to five months' supply. Some, of course, last longer, while others are continually being reordered.

We have a full-time pharmacist who works from 9:00 A.M. to 5:00 P.M. and two nights a

week from 7:00 to 8:30 o'clock. Sundays and holidays he is on from 9:00 A.M. until 12:00 A.M. He has the assistance of a clinic nurse when necessary, and the cleaning is done by a porter.

The cost of materials and supplies for 1931 were \$1769.19 and for 1932 they were \$1235.37. There were some additional interlocking items that partly belonged to the drug department but because they were principally for the pathology or other departments, they were charged elsewhere. At the most, they wouldn't amount to more than \$200 during any year.

These facts presented show that a drug department can produce equally as much revenue as the Pathology or X-ray departments of hospitals, if properly handled. The profit for 1931 was approximately \$4208.65 and for 1932 it was \$4672.94, against which should be charged space consumed, light, heat, water, insurance and depreciation.

If an attending physician wishes to prescribe a proprietary for a private patient, that is his privilege, it is procured elsewhere. However, for ward and clinic cases, the Staff is subject to rules and must confine its prescriptions to official drugs or preparations. At first this was an effort, but after they found that they obtained results from official preparations, the battle was won. I clearly proved the efficiency of many official drugs, but the most outstanding was that of Digitalis, which is used as much as any drug in a hospital. Most physicians have a favorite proprietary Digitalis preparation, so the opportunity to demonstrate the action of a standardized Powdered Digitalis was easily accomplished with wonderful results and much satisfaction. They also like to change their vehicles and they are now using some that they never before knew were official, such as Syrupus Cacao, Syrupus Idæi, etc.

The Internes particularly appreciate the Formulary as it affords them every opportunity to prescribe. They also use the same for reference purposes as to action of drugs.

The Nurses are also pleased because they use the Formulary in their studies.

Since it is one of the functions of a Superintendent to keep down costs, it is not necessary to elaborate on his reactions but I briefly want to say that the Superintendent once said in his monthly report: "The installing of our new drug department not only permits our Staff and Internes to practice better medicine but also has been the means of lowering costs." Our drug bills now prove to be \$200 less a month than heretofore.

After having this Formulary copyrighted, more than 50 requests were received from different hospitals throughout the country but particularly from the northern section, east of Chicago. I have in most instances forwarded a copy, also a Chart, and in a few cases have permitted them to make copies of the Chart, hoping that it would be the means of creating positions for Pharmacists, and of impressing the American College of Surgeons and the American Medical Association with the importance of including a Pharmacist with their other requisites for a Class "A" rating for hospitals.

PILLS AND TABLETS FOR INTESTINAL MEDICATION.

Drugs that have to pass through the stomach unchanged, but which must dissolve readily in the intestinal secretions, have in the past been coated with keratin or acted upon by formaldehyde. Cellulose esters and ethers have also been suggested, but they are unsuitable in the pure state. They are rendered suitable by a newly patented process, which consists of embedding particles of a substance more easily attacked by intestinal ferments in cellulose ester substance. Examples of embedding materials are fats, oils, waxes, lipoids and bile acids. When added to a cellulose ester or ether the latter becomes readily soluble in intestinal ferments. For example, the drug mixture may first be mixed with the pill-forming substance or filler, and then the pills are dipped into a solution consisting of equal parts of 5 per cent nitrocellulose and 5 per cent olive oil in an alcohol-ether mixture. A rapidly hardening skin is obtained over the pills. The pills may be coated with a thin sugar-gelatin layer and then dipped into a solution of 5 per cent cellulose acetate and 5 per cent castor oil in acetone. Capsules may also be made from a mixture of 5 per cent nitrocellulose and 5 per cent lecithin dissolved in equal parts of alcohol and ether. The capsules are then filled with the drug. They will not dissolve in the stomach, but will readily dissolve in the intestines.—(*Drug and Cosmetic Industry*, 4 (1933), 471.)
