cannot be polished off with towel or brush. This is all eliminated by use of the machine.

Suppositories should be wrapped in wax or parchment paper or lead foil and then placed in the customary suppository boxes. Ointments should be thoroughly milled to smoothness and dispensed in collapsible tubes. Jars, while practical, are being generally used, however, they always present possibility of contamination. Ointments should always be prepared on weight basis and not volume. After putting in jar, concaving slightly, the top should be flamed to present a smooth surface. This eliminates adherence of ointment to the cap. The author prefers the use of collapsible tubes, because of simplicity in filling, are easily sterilized, thus eliminating contamination and, also, because of the general custom of proprietary manufacturers to market ointments in this manner. The people have become accustomed to this style of ointment medication. A very simple but practical method of filling tubes is suggested: place the ointment on a sheet of heavy parchment paper, roll as making a cigarette, place into the empty tube, compress lower end of tube with spatula handle and withdraw the paper slowly, roll over the end and seal with a clip.

Label moisteners should be plentiful on the prescription counter. No labels should be licked or drawn over tongue; it is vulgar and unsanitary and displays carelessness. Probably the most important factor to consider is that the constant irritation to the tongue and lips and cuts because of the thinness of paper is possible of producing a carcinoma of tongue or lip.

The success of pharmacy as a profession demands the practice of the art of dispensing and preparation of medicinal substances. The elevation of pharmacy to its proper professional recognition is contingent on the practices of this art. True, the passage of prerequisite legislation, the selection of students of good moral character, of good citizenship, proper technical training, make better pharmacists; but, if in their practices of the art of dispensing and preparation, they are careless, neglectful, nonchalant, pharmacy will suffer a retrogression rather than an advance in its recognition as a professional group.

PHARMACY FROM THE STANDPOINT OF HOSPITAL ADMINISTRATION.*

BY B. T. HOWILER.[1]

The use of medicines in the care of the sick is the oldest practice of the healing art, in fact a knowledge of herbs and of the physiological effect of drugs and potions has in some periods of history been the chief qualification of primitive healers, for instance, the term "medicine man" of the primitive people. But medical care has moved a long way from the brews and incantations of the witch doctor and the secret distillations of the ancient alchemist. Indeed, the doctor has long since relinquished the function of preparing drugs and medicines he uses in his practice.

Medicines and the economic problem their distribution entail may be considered from three different standpoints:

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First, from the standpoint of the patient, who regards drugs and medicines as independent agents sufficient for the treatment of his illness. The patient feels that in many respects medicines are a satisfactory substitute for the ministrations or advice of a medical practitioner. The extent to which medicines are used on the recommendations of manufacturers, distributors or friends is evidence of this fact.

Second, they may be considered from the standpoint of the physician who views medicines as adjuncts to a professional service and as such are merely tools which may be used in the relief of sickness and must be applied with definite knowledge of their properties and ingredients as well as the understanding of the patient's condition.

Third, they may be considered from the standpoint of the professional pharmacist or hospital pharmacist, to whom medicines are a product of professional knowledge and skill.

Drugs and medicines reach the patient as a single commodity, but the individual prescription compounded represents the ultimate results of a variety of professional activities. The service of a pharmacy in a hospital involves the proper identification, preparation, composition and dispensing of drugs and medicines and has been carried on by the pharmaceutical profession as distinct from the medical or surgical profession. Pharmacists have maintained a distinct solidarity throughout the years, despite the specialization of individual members of the profession. By professional, reference is not made to "drug stores," as they are commonly known to-day where one is able to buy almost any named article. Professional pharmacy is just what the name implies, professional in that it deals only with the medical and dental professions, heeding their directions and orders and pharmacy, in that it really practices the art of compounding and dispensing medicines. Educational standards in pharmacy are rapidly becoming as rigorous and unyielding in their requirements as those of the medical profession.

Look for a moment to the prescriptions that are written to-day. In our own institution a survey made of every prescription filled over a period of six months showed that over sixty-five per cent were prescriptions written for proprietary medications. These preparations had been sold to the physicians by manufacturers' representatives who were able to convince the practitioner that they were excellent remedies so that with the subsequent prescribing of the remedy, the patient is presented with a prescription for which he will have to pay almost twice as much as necessary. This results from the fact that it is the patient in the final analysis who has to pay for all the sampling, detailing and advertising done by the manufacturers. In most instances the same end results may be obtained by using some preparation that is either included in the United States Pharmacopœia or in the National Formulary. We have enough evaluating standards that are official so that it becomes unnecessary to rely entirely upon some manufacturers' sales talk. There has to be a brake put on the practice of pharmacy some place. If this is not done, either the pharmacist is going to be compelled to turn his profession over to the manufacturer or he is going to have to wake up to the realization that day by day his ability as a pharmacist is decreasing due to non-use. As this writer sees it, his only salvation is in the attempt to restimulate in the medical profession the art of writing a prescription.

In a hospital this result may be obtained through the acceptance of a Formulary of tried and useful combinations. Such a Formulary may serve at least two purposes:

First, it may serve to stimulate interest in and serve as an aid in rational therapeutics.

Second, it may serve to reduce duplication, waste and confusion, such that a significant saving may accrue to both patient and the hospital.

In our own hospital this idea was conceived and put into use with the close coöperation of the medical staff. Members of each specialty in medicine and surgery were asked to submit formulas. These formulas were considered by a governing board which included the pharmacist. The only formulas accepted were those confined to U. S. P. and N. F. preparations and drugs and newer medications accepted in the New and Nonofficial Remedies publication of the American Medical Association. The resultant Formulary was a very useful and workable compendium of medications.

To consider the second purpose of such a Formulary, namely, that its use will serve to reduce duplication, waste and confusion, is to study something of prime importance to any hospital. Duplications in stock, waste due to such duplications and confusion due both to waste and duplication costs the average hospital pharmacy an inestimable sum each year. Let us take cough syrups for an example of duplications. Before the introduction of the Formulary we had seventeen different cough syrups on the shelves of the pharmacy. These took up a lot of space, collected a lot of dust and represented a substantial investment. Instead of seventeen different kinds, we now have three cough syrups which are sufficient to treat any cough. Let us say for the sake of numbers, two types of cough syrups for adults and one type for children, both of which are flexible enough so that the medication may be varied if necessary to suit the particular requirements of the patient and physician. In our own instance, in cough syrups alone the stock has been cut 80% on proprietary cough medications with the result that there is now being dispensed ten gallons of better controlled, and therapeutically more rational cough syrups of our own manufacture to one gallon of cough syrup of unknown composition of commercial manufacture. These aforesaid ten gallons of cough syrup cost on the average $3.75 a gallon containing more narcotic medication than a gallon of commercially manufactured cough syrup costing $10.20 a gallon.

Another highly competitive field is that of the barbiturates. One manufacturer states there are some 375 homologues of barbituric acid possible. These are all overpriced in comparison with the benefits obtained by the patient.

There are several types of medications of which there are countless duplications with contingent high prices but it is not necessary to mention them because most of them are known to the pharmacist.

These examples are sufficient to show what may be done by the pharmacist in a hospital if he attempts to do so, with the enlisted help and support of the medical staff, because the medical profession is very receptive to any idea which embodies ethical professional relations between the physician and the pharmacist.

In conclusion the value of a formulary to a hospital is summed up:

First, it will serve to reduce duplication, waste and confusion.

Second, it will serve to cut the cost of operation of the hospital pharmacy.

Third, it will serve to aid prescribing physicians to write therapeutically more rational prescriptions.

Fourth, it will serve to cut the cost of medications to the patient and in the final analysis, this is one of the most important benefits realized both from the standpoint of the physician and the hospital, because in both cases the first and last consideration is their guest, the patient.

THE ESTABLISHMENT AND OPERATION OF AN OPEN-ALL-NIGHT POLICY IN A RETAIL PHARMACY.*

BY HERMAN AND ROBERT ELICH.

In 1910 there were few pharmacies in Chicago that were open all night. At that time the Northwestern Pharmacy had been operating for ten years and had established a reputation for carrying an unusually large prescription stock. The owners decided that an open-all-night policy might be profitable and plans were made accordingly. The store had good transportation facilities, being located on one of six corners where three street car lines cross. There was also a transfer station of two elevated electric lines across the street.

The first difficulty encountered was to find a pharmacist who would work only at night. He would necessarily have to agree to work seven nights of the week, as it would be difficult to engage another pharmacist to relieve him on any night. After some time a reliable man was found who would work these hours, and he was employed to work during the day for a few weeks to get acquainted with the stock.

At this time advertising of the open-all-night policy was begun. Letters were sent out to doctors and handbills were distributed throughout the neighborhood. Large *Open-All-Night* signs were erected on the store building where they could be seen from the street and also from the elevated trains which ran just behind the building. Posters were placed on the elevated train platforms, in the trains themselves and in the street cars.

After a few months it was found that many people did not understand the true meaning of "open-all-night." They thought that most pharmacies were open all night because at any time the pharmacist could be summoned by ringing a night bell. This necessitated adding "We never lock our door" to the signs. The daily papers also helped to remedy this misunderstanding by writing up the "open-all-night" policy as a news item.

The returns from the first year of operation resulted in a loss in the night business. The next few years were better but the profit was very small. It was not until the fourth year that any real profit resulted. By this time the store was beginning to be better known by people both in and out of the neighborhood, and when medicine was suddenly needed at night, they remembered the "open-all-night" store and came with their prescriptions. Besides this, a new group of customers composed of night watchmen, entertainers and others whose occupations kept them up late, began to patronize the store and became regular customers that were never seen by anyone during the day.

Extra expenses, due to remaining open all night, comprise wages for one

* Section on Practical Pharmacy and Dispensing, A. PH. A., Dallas meeting, 1936.