

individual schools, will be found to have been built upon good foundations and to have been developed logically. Students who complete the courses of study comprising them will have had a liberal as well as a professional education and there should be no question as to their ability to make for themselves a dignified place in our social system and to advance the prestige of pharmacy.

THE PRESCRIPTION DEPARTMENT.*

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The prescription phase of the National Drug Store Survey has not been approached merely from the commercial angle. At no time was sight lost of the fact that the professional side of pharmacy is just as individual as the practice of medicine, dentistry or any other profession. It is true that the first and other reports of the Prescription Department will point out the benefits to be derived through greater standardization and uniformity and the adoption of modern merchandising methods, but the necessity of pharmacy operating under certain minimum requirements and rendering special and vital service to the physician and the public was and is fully realized.

The commercially minded pharmacist should not minimize the contribution which the science of pharmacy makes to his success. At the same time merchandising, when defined broadly as the application of business principles to any activity involving buying and selling, cannot be overlooked by the most professional. Such principles apply in filling prescriptions as in other phases of the business.

This becomes apparent as soon as a summary is made of the factors and business practices to which the successful operation of professional pharmacies can be attributed. Among these factors of success are:

- (1) Knowledge, skill, experience, honesty, diligence and personality of both proprietor and staff.
- (2) Physicians' support, coöperation, confidence and friendship.
- (3) Location, accessibility to physicians.
- (4) Store arrangement, adequate equipment, appearance and cleanliness.
- (5) Buying carefully, quality, variety, purity and freshness of stock.
- (6) Selling, accuracy in filling prescriptions, reasonable prices commensurate with quality and service.
- (7) Service, every possible facility, such as private telephones, switchboards, rapid calling for and delivering of prescriptions, filling prescriptions without delay, prompt attention to mail orders, having on hand new foreign and domestic preparations.
- (8) Advertising or promotion, continually contacting the physician, meeting with and speaking before physicians and internes, furnishing prescription blanks.
- (9) Bookkeeping, adequate records, annual inventory and profit and loss statement, careful extension of credit, collect bills promptly.

Nearly all of the factors enumerated above embrace the two outstanding phases of merchandising, cost control and sales promotion. It is the latter phase only that is dealt with in the report just released by the Bureau of Foreign and Domestic Commerce and entitled "Prescription Sales Analysis in Selected Drug Stores." In addition to the sale report there will be two additional reports, one a companion to the report already referred to, but dealing with cost control, and another dealing with both cost control and sales promotion in professional pharmacies.

The material contained in the report already published is presented to the 60,000 retail druggists throughout the country in the hope that it will prove a basis of increased efficiency in the operation of the prescription departments of many of their stores.

* An address before the National Drug Store Survey Conference, April 26, 1932, by Frank A. Delgado, U. S. Department of Commerce.

This report endeavors to show the important basic position the prescription department occupies in the operation of the retail pharmacy and points out opportunities for the proper application of both professional skill and modern merchandising methods.

Careful treatment is accorded the professional phase through the detailed study of nearly 24,000 prescriptions, their ingredients and the requirements of their compounding. The list of leading ingredients (161) reveals the extent to which the ingredients prescribed are chemicals or galenicals. Incidentally the bulk of them were official (listed in U. S. P. or N. F.) and should be of value to the pharmacist in building his prescription stock.

At the 1930 AMERICAN PHARMACEUTICAL ASSOCIATION Convention, pharmacists were called upon to institute adequate records for showing the total number of prescriptions filled, including refills, so that the extent of this phase of professional practice might be available for study.

A drug store could be mentioned that has filled over a million prescriptions, whose pharmacists are able to glance at their records and obtain at a glance the number of prescriptions filled for any given period, their total value for both new and refills, the average price and the daily value. Comparisons with the previous years' monthly totals are made and, if there is any evidence of business falling off, the matter is looked into so that the condition may be corrected, if possible.

The proprietor of a drug store may not need to keep a set of books devoted to the prescription department, but it is highly desirable that he know what his prescription stock inventories, and from them a detailed analysis of every phase of operation should be made. There are too many prescription departments that are not given a fair chance.

Let us see if we cannot point out how some of the facts and figures contained in this report will prove of practical value to the pharmacist, the wholesale druggist, the manufacturer, the schools of pharmacy and the approximately 2500 students that are said to graduate from these schools every year. There follow some of the answers to the questions most frequently asked regarding the prescription phase of the National Drug Store Survey.

(1) *What percentage of the drug store's volume is accounted for by the prescription departments?* It has been found in this survey to represent nearly one-fifth of the total sales volume of the independent drug stores studied when both prescription and non-prescription sales made out of the prescription department are combined. The range, however, is very wide.

(2) *Which drug stores, those with large or small sales volume, have a higher percentage of their income in prescriptions?* Drug stores with a smaller sales volume usually do a larger prescription volume in proportion to their total sales, the reason being that the prescription department as a rule does not lend itself to expansion to as great an extent as the commercial departments. This is illustrated by the fact that prescriptions only represented 3.12 and 1.58 per cent, respectively, of the total sales volume of the two chain stores studied—the stores with by far the greatest total volume; the leading five independent stores doing a volume of from approximately \$47,000 to \$77,000 a year had a prescription volume ranging from approximately eight per cent to fifteen per cent of the total sales. These percentages are for prescriptions alone and do not include other prescription department sales.

(3) *How can the pharmacist increase prescription department volume, or utilize the prescription department as a means for increased volume in other professional departments?* The possibilities for increased sales and profits in the prescription department and professional departments are so many that they could be made the subject of a lengthy article. Without counter-prescribing, the pharmacist could well use his professional knowledge to suggest to those customers having prescriptions filled, the purchase of such auxiliary items as fever thermometers, hospital and first-aid supplies, hot water bottles, ice caps, rubbing alcohol, disinfectants, deodorants, fumigators, baby, diabetic and invalid foods and numerous other items. The nature of the prescription would suggest the item indicated.

(4) *What other possibilities for prescription department sales expansion exist, that will keep the pharmacist busy and allow him to exercise his professional knowledge?* The pharmacist has an average of 1500 or from 900 to 2200 different drugs, chemicals and galenicals in the laboratory. An analysis of ingredients used in filling prescriptions that will be referred to later on reveals that only from approximately 500 to 800 of these are actually employed in filling prescriptions. Of course, the disparity between the two sets of figures is partially accounted for by the fact that the inventory records as a separate item, any chemical, drug or preparation in each of its forms, sizes, etc., whereas the ingredient compilation conversely lists a substance as a single item, regardless of

the number of different sizes or whether it was in powdered or crystal form. The pharmacist is placed in a very favorable position to sell disinfectants, insecticides, raticides, furniture and metal polishes, dry cleaners, bleaching solutions and numerous other preparations. Apparently, pharmacists have in many instances side-tracked these items for other merchandise that are far removed from pharmacy.

(5) *What other sales are made from the prescription department other than actual prescriptions?* Bulk sales of crude drugs, chemicals, galenicals, essential oils and manufacturers' specialties, such as gum arabic, cinnamon bark, oxalic acid, bismuth subnitrate, ammoniated mercury ointment, syrup of white pine and tar, elixir of digestive compound, argyrol solution, ichthyol, calomel tablets, quinine capsules. To determine approximately the extent of these non-prescription sales a check was made for 50 days in Store 1. During the 50 days the prescription department had 1830 non-prescription sales, an average of 36.6 such sales a day. The average value per sale was found to be 27.6 cents, these sales amounting to an average of \$10.10 a day, or \$504.77 for the 50-day period.

It is believed that the customer would frequently buy large amounts of these items if the pharmacist pointed out that a saving could be effected thereby.

(6) *How can the pharmacist attract attention to his prescription and professional departments?* One way is by substituting some educational or professional windows for the stereotyped commercial window displays that are seen so frequently these days. Display those old symbols of pharmacy, the gilded mortar and the show globe. Do not only prepare such a display once a year on National Pharmacy Week, but have them often. Take for example an outstanding Tennessee drug firm. This firm does a good fountain, luncheonette, cigar, candy and toilet preparation business, nevertheless, special emphasis is laid upon the prescription department in their window dressing and at least one street window at all times is devoted to their prescription department. On November 27, 1931, this store filled its millionth prescription. Prescription No. 1 was filled late in 1912.

In Trenton, N. J., an enterprising druggist builds good-will by sending with every prescription for a child a little puzzle to keep the child amused. This same druggist asks his customers whether the doctor specifically recommended his store and, if so, he mails the doctor a letter of thanks.

(7) *What was the average minimum and maximum number of prescriptions filled per day?* The 13 stores filled an average of 15.3 prescriptions per day, of which 3.9 were refills and 11.4 new prescriptions. The new prescriptions were divided 9.7 or 85 per cent non-narcotic and 1.7 or 15 per cent narcotic. However, there was a considerable range in these figures from store to store. For example, in the case of total new prescriptions, the range was from 24.9 daily in Store 1 to 4.4 in Store 11.

(8) *Did this include refills?* Yes, there was an average of approximately four refills per day. Refills accounted for 25 per cent of the total. However, refills varied from approximately 10 per cent to 45 per cent of the total number of prescriptions filled. Those stores that had been in business a long time usually led in refills. Also, the stores located in a higher income community led in number of refills.

(9) *What was the maximum number of prescriptions filled per day?* Four of the stores filled approximately 20, 22, 31 and 40 prescriptions per day. The store filling 40 prescriptions per day was a chain.

(10) *What was the minimum number of prescriptions filled?* Three of the stores filled from 6.2 to 6.5 prescriptions per day.

(11) *What was the average price charged for all prescriptions?* The average price charged for all prescriptions was \$.92. However, this varied; for example, this average was \$.91 for all non-narcotic prescriptions and \$.97 for narcotic prescriptions. Then again the non-narcotic prescriptions were priced at only \$.84 when all the ingredients were official, that is, U. S. P. or N. F. Non-narcotic prescriptions that contained a combination of both official and specialty ingredients were about ten per cent higher, or \$.93, whereas, non-narcotic prescriptions that consisted only of specialties were \$1.02 or about 22% higher.

There was not a great variation in narcotic prescription prices regardless of whether the ingredients were official, specialty or a combination of these two classes.

(12) *What were the average prices charged for new and refill prescriptions?* New prescrip-

tions averaged \$.95 each and refills averaged \$1.00 each. The reason for this is the tendency of customers to order a larger quantity when obtaining refills. It was found that the druggist often pointed out to the customer that a saving could be effected by having the prescription doubled, if the customer intended to use the medicine over a long period.

(13) *Was the location of the store, type of customer served, or its sales volume responsible for difference in price charged?* There seemed to be no indication for the wide variation in prescription prices charged other than management. However, stores numbers 1, 2, 4 and 7 located at the intersections of main traffic arteries received prices above the average.

(14) *What relation, if any, is there between number of prescriptions filled and prices charged?* It was found that as the number of prescriptions filled increased, so did the average prices charged. There were only two exceptions among the 13 usual commercial type stores studied. The explanation for this would at first appear to be that the more prescriptions filled, the greater likelihood of the store taking on the aspect of a professional store, and as a consequence handling and dispensing a large proportion of high priced domestic and foreign specialties. In the two exceptions noted, one was a chain store and while, in number of prescriptions filled, it was the lowest store but three, it was the fifth highest in price. This store carried a wide variety of items in the prescription department, due to the fact that they filled very few prescriptions from the same doctor. The approximate 2000 prescriptions studied in this store were written by 551 doctors, whereas, 5500 prescriptions studied in a professional store nearby were written by only 444 doctors, and 3500 prescriptions studied in another professional store in the same neighborhood were written by only 250 doctors. The other exception was a store that filled the lowest number of prescriptions of all 13 stores, but charged the second highest average price. This store did not carry a wide variety of ingredients in its prescription department, nor did the neighborhood warrant above average prices. The price policy was obviously one of individual management.

(15) *Was there any difference in price policy between the usual commercial type stores and the professional stores?* The facts regarding the professional store will be published in a separate report. However, there was evidence that the prices set by professional stores were based to a greater degree on the cost of ingredients. The average price charged by the two professional stores for non-narcotic *U. S. P. and N. F. prescriptions* averaged only \$.67 and \$.80 each as against \$.84 for the same type of prescriptions for the usual commercial type store. However, the professional stores charged an average price of \$1.04 each for specialty prescriptions against an average price of \$1.02 each charged by the other stores. Some specialty prescriptions present a pricing problem to drug stores, inasmuch as department stores carry them and feature them as loss leaders.

(16) *What was the usual price charged for prescriptions?* Over 57 per cent of the 24,000 prescriptions studied were priced at from \$.75 to \$1.00, thus clearly showing this price range to be the most usual. Approximately twenty per cent were priced from \$.50 to \$.70. Eighteen per cent were priced at from \$1.05 to \$1.50 and approximately four per cent were priced at over \$2.00. Or it might be stated that only 21 per cent of the 24,000 prescriptions studied were priced at over \$1.00. The narcotic prescriptions generally were priced somewhat higher than the non-narcotics. Only 12.51 per cent of the narcotic prescriptions were priced below \$.75, while 22.86 per cent of the non-narcotic prescriptions were so priced.

(17) *Were there any examples of abnormally low priced prescriptions?* Out of approximately 24,000 prescriptions analyzed, 610 or 2.54 per cent were priced at less than 50 cents. Of the 610 prescriptions referred to above, 565 were non-narcotic and 45 were narcotic. Of this minimum price group, 19 were priced at \$.10, which includes one narcotic; 55 were priced at \$.25 which includes 6 narcotics; 39 were priced at \$.30; including three narcotics; 159 were priced at \$.35 including 18 narcotics and 338 were priced at \$.40 or \$.45 including 17 narcotics.

While it is realized that it is difficult in a number of cases to charge more than a nominal sum for an extremely simple prescription, it is believed that the pharmacist frequently loses sight of the fact that even the simplest prescription involves an exercise of professional knowledge and that more consideration should be given to elements of cost in handling which are the same on every prescription transaction.

(18) *Were there many prescriptions selling for over \$2.00?* Of the nearly 24,000 prescriptions studied, only 96 were classified as high priced prescriptions, that is, prescriptions selling for \$2.00 or more.

Most of the high priced prescriptions were sold at from \$2.00 to \$4.00. However, while these were the more common high priced prescriptions, there were a few prescriptions which were considerably more expensive, one selling for as high as \$11.50. However, only 3 of the 96 prescriptions were high priced because a large quantity was sold.

Fifty-nine of the 96 high priced prescriptions were proprietaries. High priced prescriptions were sold in stores of largest sales volume having customers with greatest purchasing power. Four stores, together, accounted for more than half of the high priced prescriptions sold.

(19) *Were there any examples of marked prescription price inconsistencies?* Yes, there was found to be a wide variation in price based more on size than on cost of ingredients. For example, in one store the charge for a prescription consisting of Codeine Phosphate grains 16, Syrup of Thiocol ounces 1, and Syrup of Premocal Q. S. ounces 3, was only \$1.25. This was obviously too low. The same store filled a prescription for Tincture of Opium drachms 2 and Milk of Magnesia ounces 8 at a charge of \$1.40. The quantity was nearly three times greater than the first prescription but the cost of ingredients much less. There was another instance where one store charged \$.60 for a prescription of 20 tablets of a specialty nature, while another store charged \$.75 for 40 of the same tablets.

The discussion of another angle of price information that we have compiled will be discussed in a future report, and that is price according to form, size and contents. We have an elaborate table showing the average price of liquid prescriptions according to contents and whether official, specialty or mixed. We have the same information for capsules, ointments, suppositories, charts, and bulk powder, prescriptions, etc. For example, an examination of this table would show that all stores charged from six to fourteen cents more for a four-ounce liquid specialty prescription than for a four-ounce liquid official prescription, and from two to thirty-four cents more for a twelve-capsule specialty prescription than for a twelve-capsule official prescription.

This report will also record certain price discrepancies and recommendations will be made regarding a cost and price method that it is hoped will reduce their number.

(20) *In what form are prescriptions in greatest demand?* It was ascertained that 61.29 per cent of the prescriptions were liquids. An even slightly greater per cent of the non-narcotic prescriptions were liquid in form, but a smaller per cent of the narcotic prescriptions were liquids, although this was the most used form for narcotics.

The form which was the second most popular was capsules, which comprised 17.51 per cent of all prescriptions. However, capsules were used in 40.12 per cent of the narcotic prescriptions, being the form used in nearly as many cases as was liquid.

Tablets were used in 9.91 per cent of the prescriptions, the percentage being a little higher for the non-narcotics but amounting to only 7.84 per cent of the narcotic. Thus it will be seen that these three forms of prescriptions, liquids, capsules and tablets, accounted for approximately 89 per cent of all prescriptions, and 95.95 per cent of the narcotic prescriptions.

Ointments account for 3.8 per cent, divided powders for 3.3 per cent, bulk powders for 1.5 per cent, effervescent salts for 1.3, pills for approximately 1 per cent, suppositories for less than one-third of 1 per cent. The remaining one-fifth of 1 per cent was divided among a miscellaneous group consisting of konseals, platers, globules, pearls, crude drugs, etc.

It has not been customary to think of the prescription filling operations of a drug store as constituting an impressive manufacturing industry. Liquid prescription in the U. S. averaged four ounces each and 61 per cent of all prescriptions filled were liquid. It would appear from these figures and the estimates as to number of prescriptions filled that production in the retail drug stores would amount to approximately 1,000,000 gallons.

It has been suggested that schools of pharmacy may find the information regarding form of practical value in their course in operative pharmacy.

(21) *What quantity of liquid was most frequently presented?* The 4-oz. size was easily the most in demand, representing 27.48 per cent of the liquid prescriptions. The 3-oz. size was a close second in sales. These two sizes together accounted for nearly half of the liquid prescriptions. The 1-oz., 2-oz. and 6-oz. sizes were the only other sizes of outstanding importance, together accounting for 37.04 per cent of the liquid prescriptions. All of the other sizes together represented only 13.62 per cent of the liquid prescriptions studied.

An example of the practical application that can be made from this information follows: A manufacturer of bottles and other glassware recently offered a deal whereby with every order of

ten or more cases of prescription ware, a set of three double-scale graduates would be given free. On the above analysis of liquid prescriptions according to size, it is possible to state that 10 of the 13 stores could have used one or more of these deals in one year or less for prescription alone. In a future report the liquid prescriptions should be broken down further into eye solutions, emulsions, lotions, liniments and other liquids.

(22) *Is it true that the compounding of prescriptions has become a mere pouring out of a liquid or counting out a certain number of pills or tablets?* Just the contrary is indicated, the survey shows that 65 per cent of the prescriptions call for more than one ingredient. Over 4 per cent of the prescriptions called for six or more ingredients.

Narcotic prescriptions were found to average 3.2 ingredients each whereas non-narcotic prescriptions averaged only 2.4 ingredients each.

(23) *To what extent is skill and knowledge required in compounding prescriptions?* It is true that prescribing habits have changed. Prescriptions calling for a large number of ingredients are not as common. There are fewer prescriptions for hand-made pills, complicated suppository formulas, emulsions, and odd fluid extracts. As a consequence pharmacists are relieved of some of the responsibilities that were formerly theirs in the matter of incompatibles and doses. On the other hand they have taken on new and important duties in that they are called upon to supply much information of a scientific order that involves a knowledge of physiology and physiological chemistry. They must know gland products, biologicals, ampoules and scientific specialties.

It is difficult to determine exactly the skill required for various prescriptions. Even a prescription containing just one ingredient, and which might be considered to require no skill in compounding, really requires careful attention and judgment; the importance of the question of dosage alone cannot be underestimated.

(24) *Was the size of the empty capsule used always indicated?* Only a little more than one out of four capsule prescriptions indicated the size of capsule used. Indication of the size of capsule used or for that matter the powder paper and the size of the box in which powders are dispensed can well be considered a step toward greater efficiency, for it anticipates any possible customer criticism and loss of confidence in the pharmacist.

(25) *What percentage of the number of prescriptions studied were written in the metric system?* It was found that only 7.67 per cent of the prescriptions studied in 12 of the 13 stores were written in the metric system. Some of the stores studied were not equipped with a set of metric weights. Studies of the causes of inaccuracies in prescription compounding have at times pointed out as a major cause the fact that druggists not having metric weights and measures are liable to make mistakes when transcribing prescriptions written in the metric system to the apothecary system in compounding the prescriptions. Converting, like a pestilence, should be avoided when possible. Formulas written in the metric system call for the use of metric weights and measures. Actual use of metric weights will teach one to visualize the quantity of a drug or chemical that weighs a certain number of grammes, so that when one reads a prescription calling for this amount he will visualize it in metric quantities rather than the equivalent in avoirdupois or apothecaries weights or measures.

(26) *How many physicians wrote the prescription analyzed in each store, and what was the percentage accounted for by each?* A large proportion of the number of physicians writing the prescriptions studied wrote only one or two prescriptions each, for any one store. These doctors represented from 50 per cent to 70 per cent of the total number of physicians writing the prescriptions studied in any one store.

There were generally a few physicians individually writing a large number of the prescriptions studied. For example, in store 3-B, four physicians each wrote more than 100 of the prescriptions, and together the prescriptions of these four physicians represented 35 per cent of the prescriptions studied.

A special study was made in order to ascertain the extent to which each physician wrote prescriptions in 8 of the stores studied. The per cent of total prescription business accounted for by the 10 leading physicians in each store was fairly uniform for 6 of the 8 stores, ranging from 43.75 per cent in store 11-B to 58.35 per cent in Store 7-B, where a woman physician accounted for nearly 40 per cent of the prescriptions studied. However, the 10 leading physicians in Store 2 contributed only 21.02 per cent of its prescription business. This study shows quite clearly that most prescription departments depend quite largely on a small number of physicians for about

half of their business, the other half being written by more occasional physicians. Although three stores had from about one-fifth to one-quarter of their prescription business, as judged from the prescriptions studied, from the prescriptions of their leading physicians, none of them depended on a single physician for a great part of their business, with the exception of two of the stores, 13-D and 7-B.

This information would seem to indicate that it should not be difficult for the pharmacist to detail those physicians who write the majority of the prescriptions he fills in terms of products of his own manufacture, such as U. S. P. or N. F. preparations, or manufactures specialties.

These facts should also impress the pharmacist of the necessity of retaining the good-will of his leading physicians by rendering maximum service to their patients. It should also point out the desirability of cultivating the patronage of additional physicians, for, while every store naturally welcomes a large prescription business from any physician, nevertheless, a condition such as one or two physicians accounting for a good majority of the prescription business is a bit dangerous. The disastrous effects on the prescription department of a store in the event this physician suddenly ceased to practice can well be imagined.

(27) *Was the type of practice engaged in by physicians shown?* Yes, this was done for eight of the stores and, while no conclusion can necessarily be drawn, it is interesting to note that, in the eight stores studied, general practitioners wrote the largest number of prescriptions. In three of the stores, all of the 10 leading physicians were general practitioners, while most of them were general practitioners in several stores. In store 11-B there was nearly equal division between general practitioners, surgeons and physicians who were both surgeons and general practitioners; but the two leading physicians in the store's prescription business were general practitioners.

(28) *How many of the prescriptions studied were difficult to read?* Approximately 750 or 3.13 per cent of the prescriptions studied registered poor legibility and 76 per cent were recorded as fair. Poor legibility is a costly factor as it often delays the filling of a prescription until the druggist can communicate with the doctor. Where two words are quite similar, poor legibility might at times lead to the use of the wrong ingredient.

An interesting case that might be mentioned was where a physician wrote a single ingredient prescription. The directions read "as directed," the item appeared to be Lysol. Everything was apparently in order. But this pharmacist made it a point to always ascertain if his customers clearly understood the use of the drug, or drugs, when only "as directed" was written. Upon questioning it developed that Laxol was intended and the patient was to have taken a tablespoonful. The pharmacist's care in this instance may have saved a life. The incident not only points out the importance of the physician writing legibly, but likewise the fact that the use of the term "as directed" should be employed sparingly. This is a subject that might be advantageously discussed in joint meetings attended by pharmacists and physicians.

(29) *Do physicians specify any particular brand when prescribing galenicals?* Only slightly more than one per cent of all prescriptions studied specify the galenicals of any particular brand, or firm. It should be clearly understood that this tabulation does not include manufacturer's trade name, pharmaceutical specialties, but only such galenicals as, for example, tablets of acetphenitidi, elixir of digestive compound, etc.

(30) *To what extent do physicians dispense their own medicines in the country?* A report entitled "Wholesaler-Retailer Relation Study for Druggists" to be released shortly after the drug store survey field work is completed will state that. In towns with a population of less than 3000, nearly one-third of the drug dispensing is by physicians, while in towns of more than 12,000 inhabitants very little or no dispensing by physicians was found in a majority of cases, although such dispensing was considerable even in some of these larger towns. In a report entitled "The Costs of Medicines" recently released by the Committee on the Cost of Medical Care it is stated that \$25,000,000 worth of medicines are dispensed annually by physicians.

(31) *To what extent do physicians dispense their own medicines in large cities?* It was not possible to determine the exact number of physicians in the city of St. Louis who do their own dispensing. However, certain drug manufacturing houses gave the following information and, while not inclusive of all dispensing physicians, it will show that there is still considerable dispensing by physicians in that city. One manufacturer sells only to 50 doctors whose volume of business is enough to justify a salesman's call. Another firm sells to about 200 dispensing doctors in the city.

Another firm, the activities of which are almost entirely among dispensing physicians, the firm doing very little business with retail drug stores, had a list of 349 dispensing doctors in St. Louis, but even this list was not claimed by the firm to include all of the dispensing physicians in that city. To show what proportion of the total number of doctors in St. Louis do their own dispensing, it might be stated that there are more than 2000 doctors in the city. The most complete list contained 2346 names, and included institutional men and professors at the medical schools.

(32) *How many ingredients were used in filling the prescriptions studied in each store?* There was an average of 608 ingredients, of which 39.7 appeared but once and an additional 15.2 only twice.

(33) *Did the number of ingredients used vary directly with the number of prescriptions filled?* Not necessarily; for example, one of the stores, a chain, that stood tenth in number of prescriptions filled, ranked second in number of ingredients used, having employed 682 different ingredients in the filling of 2000 prescriptions. This is accounted for by the fact that the prescriptions studied in this store were written by 549 physicians, or an average of less than four prescriptions per physician.

Another store that stood high not only in number of prescriptions filled, but in percentage of total sales volume, used the smallest number of ingredients of any store excepting one. This store draws a large share of its business from physicians whose offices are nearby.

It is thus clearly shown the necessity of carrying a wide variety of ingredients in ratio to the variety of the physicians writing the prescriptions, rather than the volume of prescription business.

(34) *What was the relation between the number of ingredients used in filling prescriptions and the number of items stocked in the prescription department?* There was approximately one different ingredient used in filling the prescriptions studied for every three stocked in the prescription department.

All of the stores had the same inventory problem. The number of ingredients used in filling the prescriptions studied accounted for only an average of 37 per cent of those stocked in the prescription department. However, this varied from 28 per cent in one store to 54 per cent in another store. It is interesting to note that the store with only 28 per cent had the highest prescription volume of any store studied. There is no logical explanation for his prescription stock so far exceeding his prescription requirements, other than it is an old store and probably has an accumulation of slow-moving prescription items. The same explanation might be offered for the 54 per cent store. This was a new store in a modern residential district; it stood fifth in prescription sales volume.

A portion of this disparity between the number of ingredients dispensed in prescriptions and carried in stock is accounted for by the fact that there are sometimes two or more brands of the same item stocked. Also in the case of tablets as, for example, calomel or strychnine tablets, there are several different strengths, such as from $\frac{1}{10}$ of a grain to 2-grain calomel tablets. Chemicals are found in powdered or crystal form. Another reason is that the same item may be duplicated in two or three sizes, such as a handy container for convenience and a larger bottle or package containing a surplus supply. Then again it must be recalled that a large number of items stocked and sold out of the prescription department are not necessarily dispensed in prescriptions, for example, essential oils and crude drugs.

(35) *How many items were stocked in the prescription department and what proportion of the total did they account for?* There was an average of approximately 1500 items stocked in the prescription department as against 5070 for the store as a whole, or 29 per cent of the total items stocked were in the prescription department. The number of prescription items varied from approximately 900 to 2200. The number of items stocked was more or less in ratio to the prescription volume. However, there were a number of exceptions, the most outstanding being a store filling 6 prescriptions a day, and having only a 6 per cent prescription sales volume. This store carried 1562 different prescription items.

In comparing the number of items in the prescription stock with other drug store departments or the store as a whole, it should be borne in mind that items, not units, are being compared; for example, one gross of liver pills or tooth paste is only one item.

Any discussion of the number and variety of items in a prescription department should take

cognizance of the definite changes that have taken place in the study and practice of medicine and their effect on pharmacy.

These changes have no doubt affected the character and variety of ingredients and it would seem reasonable to expect to find a very much larger range of items in a store of some age than a newer store. The thought suggests itself that where the long established pharmacy finds its prescription inventory top-heavy that it would be warranted in disposing of at least from one to five per cent of the number of items stocked, thereby gaining, if nothing else, some valuable shelf space.

(36) *Will it be possible to show the total amount invested in the inventory of the prescription department of each store?* Figures available for four of the independent stores show that the prescription department inventory accounts for, on an average of, one-sixth of the total inventory or for these four stores an average prescription stock inventory of \$1140 against \$6800 total inventory. The prescription stock investment of these four stores ranges from \$407.00 for a store with 913 prescription items to \$1980.00 for a store with 2163 prescription items.

(37) *How was the prescription inventory investment divided among chemicals, galenicals, crude drug specialties, biologicals, essential oils, etc?* This question will be answered more accurately and fully in the second report. At present, based on figures for four stores, we find that specialties are responsible for from thirty to thirty-eight per cent of the prescription inventory investment, nor does this include specialties in tablet form which, when added, will probably bring the total up to from 35 to 45 per cent.

Galenicals not including tablets accounted for from 20 per cent to 30 per cent of the dollar inventory or an average of 24 per cent. Chemicals accounted for 11 to 14 per cent of inventory value.

The share of other items in the value of the prescription department inventory was as follows:

Biologicals accounted for from 2 per cent to 8 per cent, or an average of 4 per cent.

Glandular products accounted for from 4 per cent to 7 per cent or an average of 5 per cent. Incidentally some of these were of a specialty character.

Essential oils accounted for an average of approximately 2 per cent and botanical drugs for an average of 2½ per cent, while ampules were not present in two of the stores, but accounted for 2 per cent each in the other 2 stores.

The remainder was accounted for by a few miscellaneous items not otherwise classified, and accounting for a little less than 1 per cent for each store.

The multiplicity of the prescription items and the order of their occurrence, particularly specialties, shows clearly the necessity of the pharmacist keeping his figures in the right proportion to sales volume.

(38) *What are the leading ingredients used in prescriptions?* As has been previously stated for the purpose of the ingredient study, any ingredient which appeared 25 times or more in the 15,063 prescriptions studied in eight stores was considered a leading ingredient. A total of 1746 different ingredients were used in compounding these prescriptions and 230 or 13 per cent of them had an occurrence of 25 times or over. Of the 230 leading ingredients, 80 were chemicals, 81 were galenicals and 69 were proprietaries. Of the eighty chemicals, all were official (that is, U. S. P. or N. F.) except three. Of the eighty-one galenicals and miscellaneous drugs and preparations, all were official (U. S. P. or N. F.) except twelve. The majority of these were of a semi-official character, consisting in a number of cases of tablets or elixirs of official substances.

Twenty-four of the 69 specialties were found to have official equivalents, fourteen of which were included among the official chemicals and galenicals referred to above. The ingredients occurring 25 times or more are shown in the table contained in the printed report entitled Domestic Commerce Series—No. 61 "Prescription Department Sales Analysis in Selected Drug Stores" for sale by the Superintendent of Documents, Washington, D. C., price 5 cents. At this time it is gratifying to state that already this list has been put to practical use by a chemical manufacturer to check an assortment of 50 chemicals that they sell in a lot and recommended as being probably those most frequently called for.

CONCLUSION.

The pharmacist who takes pride in his profession and realizes that it is the prestige department of his business, the department that establishes confidence for him in the community, should, whether his prescription volume is large or small, whether it brings a profit or a loss, be

anxious to secure accurate data that will enable him to judge whether or not his prescription department is susceptible of improvement.

The value of the report will depend upon the use made of it. If the pharmacist looks it over casually, merely as of general interest, he is not apt to profit much by it. If it stirs in him a desire to find out how his store compares with the average in number of prescriptions filled, in prices charged, in ingredients used and required, in number of prescriptions from each physician, and instills in him the desire and necessity of compiling similar records based upon the transactions occurring daily in his own prescription department, then he is on his way to acquire knowledge that will not only make of him a better pharmacist but will prove remunerative.

Records to many druggists are just a meaningless set of figures. One definition of the word "record" is "the best performance." Incidentally, those druggists who keep record of their prescription transactions will generally be found numbered among those whose prescription business might be termed an outstanding performance.

ASSOCIATION MEETINGS.

"If a member of an association were to visualize results of applied ideas such as have been successfully used by other business men, he would not be apt to say, 'I will not have to go to the convention this year,' but rather, 'this is another year that I cannot afford to miss the chance of picking up something new.' The second reason is based on a lack of knowledge of what the convention can do and has done for business men in similar or comparable lines. If individual commercial and industrial organizations can afford to invest time and money of their employees in a three-day sales convention once a year, then the trade or professional associate should have no great difficulty in demonstrating the possible value of a trip to his annual convention."
