

With this survey of Pharmacy and its far-reaching recommendations, endorsed by the Committee on the Costs of Medical Care, before us, I may perhaps be pardoned for venturing a prophecy as to what developments we may look forward to in the next twenty-five years.

The public will continue to support the modern drug store and will expect it to supply many non-medical services along with complete pharmaceutical service. There will be an increasing realization, however, that the "jack of all trades," although frequently a convenience, is to be avoided when the services of a master pharmacist are required. Prescription specialists will be sought out just as medical specialists are now given preference to the general practitioner. The corner drug stores will be the base of operations of the general practitioner in pharmacy. He will become more and more a dispenser of ready-made drugs and medicines. He will refer demands for unusual prescriptions and other pharmaceutical service to the specialist, just as the general practitioner of medicine refers unusual cases to the specialist. The pharmaceutical Code of Ethics will have to be developed to cover the new conditions as they arise.

The pharmaceutical specialist will work in close harmony with physicians. He will be located near medical centers and will frequently be affiliated with them. His base of operations may be a laboratory in a physician's office building, a hospital laboratory or a prescription pharmacy in a busy section of a city.

As health insurance schemes and industrial or State medicine develop, opportunities for the practice of professional pharmacy in these respective fields will become available and will be seized by well-trained pharmacists who now hunger for a chance to practice their profession. Advice on preventive measures, diet and health regulation will be sought and obtainable from the pharmacist. Education of the pharmacist will gradually swing from the narrow field of drug therapy to the broader field of health conservation in all its phases. The present courses in pharmacy will be found inadequate for training the pharmacist who desires to meet the needs which modern medical practice will demand of him. Radical changes in curricula will be demanded and graduate instruction will become an inevitable prerequisite for the practice of pharmacy in its strictly professional aspects. The business of conducting a Pharmacy and the professional Practice of Pharmacy will be gradually divorced. Both will be honorable pursuits engaged in by men of decidedly different inclinations and training but with health service to the public as their common aim.

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## SOME PROFESSIONAL PHARMACY FACTS DERIVED FROM THE NATIONAL DRUG STORE SURVEY.\*

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The prescription department is the foundation of the drug store; it is the prestige department, the department that furnishes an outlet for the pharmacist's professional knowledge. It is the one thing that distinguishes a drug store from other types of retail outlets, and no discussion of the business side of the drug store should be entered upon without due consideration that pharmacy is a profession.

In recognizing the professional phase of pharmacy it has been customary to contrast it with the commercial aspects of the retail drug store. It would be more accurate perhaps to consider that most departments of the store have both professional and commercial aspects. The term merchandising broadly defined has the two phases of cost control and sales promotion. Much has been said about properly merchandising those departments in the drug store not related to public health. Perhaps it is time to point out that the possibilities for greater sales and profits through cost control and sales promotion in the prescription department are as worthy of consideration as in any other part of the drug store.

It is certain that variations in costs of materials and in inventory and the establishment of prices which will permit the filling of prescriptions at a profit present problems quite as difficult as the maintenance of proper accounting control on packaged drug store merchandise. Attractive

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<sup>1</sup> An address delivered at the Second Annual Druggists' Business Conference held at Purdue University, Lafayette, Indiana, February 24 and 25, 1932.

and sanitary appearance of the store has just as much importance in creating prescription business as in creating fountain business. The prescription department should certainly be granted its place in advertising and window display. There is even a proper opportunity for direct sales suggestion in the conduct of this phase of the business. Even for the druggist who may not desire to suggest remedies it can scarcely be questioned that he may with all propriety suggest the purchase of such auxiliary items as fever thermometers, hospital supplies, first-aid equipment, rubber sundries and numerous other items associated with the preservation of health.

Plans have been announced for a two-day conference of retail pharmacists, wholesalers, manufacturers and pharmaceutical educators to be held in St. Louis, Missouri, April 26th and 27th at which time the application of the results of the survey now being conducted in St. Louis by the United States Department of Commerce in coöperation with the National Drug Store Survey Committee will be discussed.

Field work in St. Louis will be completed with a final inventory April 1st, although analysis of statistics and publication of reports will occupy an additional year. However, at least three chapters of the study on store arrangement, causes of bankruptcy and the drug store package are expected to be published in pamphlet form by the time of the April meeting. It is also expected that the first part of the prescription report dealing with volume and entitled "Prescription Department Sales in Selected Drug Stores" will be available for distribution. Also there will be detailed consideration of customer problems and other phases of the survey farthest advanced.

#### RESULTS TO BE NATIONAL IN THEIR APPLICATION.

Before reviewing a few of the Survey findings in the prescription department, which is the theme of this paper, it should be emphatically stated that although St. Louis is the laboratory where the distribution problems of the approximately 15,000 items sold through retail drug stores will be analyzed, the results will be by no means necessarily local in their application.

#### METHOD AND DIVISION OF PRESCRIPTIONS FILLED ANNUALLY INTO 1. NEW NON-NARCOTIC 2. NEW NARCOTIC 3. REFILLS 4. LIQUOR.

It was ascertained that during the fiscal year May 1, 1930, to April 30, 1931, the 11 independent and 2 chain stores being studied filled 84,088 prescriptions, divided as follows: 54,302 or 64.5 per cent new prescriptions; 18,726 or 22.2 per cent refill prescriptions; and 11,060 or 13.3 per cent liquor prescriptions. The 54,302 or 64.5 per cent new prescriptions were divided into 46,480 non-narcotic and 7822 narcotic prescriptions. Over 44 per cent of the 54,302 new prescriptions just mentioned were analyzed.

Instead of studying an equal number for each month in the year, seasonal variations were considered and a larger number were analyzed for the winter months (December to April, inclusive) than the summer months (May to November, inclusive). The subject of seasonal variations is dealt with elsewhere in this paper.

During the conduct of the prescription analysis a conscientious effort was made to check or compare the facts regarding refills, average prices and average number of prescriptions filled per store, and the division of prescriptions into narcotics and non-narcotics with the results of other prescription surveys.

#### AVERAGE NUMBER OF PRESCRIPTIONS FILLED DAILY BY TYPE.

The 13 usual commercial type stores are filling an average of 15.4 prescriptions per day each exclusive of liquor prescriptions divided 11.4 new and 4 refill prescriptions. The proportion of new prescriptions represented by narcotic prescriptions approximated 15 per cent.

The information compiled regarding narcotics shows that nine of the thirteen stores had the problem of filling narcotic prescriptions and complying with the provisions and requirements of the Harrison Narcotic Law, also State pharmaceutical poison laws arise at least once a day.

#### PROFESSIONAL STORE FINDINGS SHOULD FURNISH TRENDS.

In addition to the 23,963 prescriptions already referred to, we are analyzing 10,000 more from two professional pharmacies.

The findings for the professional stores will probably be published separately and only a few are available at present. The original plans did not call for the inclusion of a professional type store, but it was realized that the failure to do so would constitute a serious omission, due

to the fact that among other reasons prescriptions filled by professional pharmacies cover a wider range. Such prescriptions are written by physicians with a varied practice, including specialists in every field of medicine, and filling them requires a much larger stock and a wider range of ingredients.

However, a well-stocked prescription department doing a large business does not guarantee the proprietor that he will be able to fill all prescriptions presented. This fact was brought out in an interview with the manager of a well-stocked St. Louis professional pharmacy who stated that he was presented with a prescription at least every other day containing ingredients not stocked. He attributed this condition to the large number of manufacturers' specialties constantly being put on the market and detailed to physicians.

This pharmacist expressed the opinion that no drug store could hope to achieve the Utopian ideal of maintaining a complete enough stock to fill all prescriptions presented and that the best that could be done was to keep supplied with the materials generally prescribed by those physicians whose patients normally patronize the store.

An interesting fact that is ascertainable from the study of the professional drug stores is that 7 per cent of their prescriptions are the private formula type, whereas this type of prescription is apparently negligible in the usual commercial type drug stores.

Another reason for including the professional stores, was that one of the stores had been in business over 25 years, and by going back and analyzing a group of prescriptions filled twenty years ago, and another group ten years later and the remainder in the current year, changes in prices charged for prescriptions and other trends would be established.

The value of any study depends a great deal on the use made of it and the value of the information brought out by the prescription study will depend very considerably upon trends discovered. The best kind of a survey is, of course, a continuing survey or one made at convenient periods, and which thereafter will definitely show the trends. It is hoped that this and other similar studies will not only show the changes going on now, but will serve as an indicator that may be useful after the present survey has been completed.

Interesting preliminary findings that indicate certain unexpected trends are already being revealed as a result of the professional prescription store study. A partial examination of 2000 prescriptions divided equally between 1910 and 1920 show that while the number of different ingredients required to fill 1000 prescriptions increased only 14, or from 495 to 509, the number of different proprietaries prescribed decreased 14, or from 154 to 136, chemicals remained practically stationary being 155 for 1910 and 156 for 1920. However, there were 31 more galenicals and miscellaneous drugs prescribed, the number increasing from 156 to 187. (The figures and percentages mentioned are, of course, only preliminary, likewise any other figures that may be quoted are not to be considered final.)

An examination of those ingredients occurring during 1910 and 1920 disclosed among other things the names of a number of specialties that are not now being prescribed, having changed their character to proprietaries sold direct to the public.

#### PRESCRIPTION DEPARTMENT SALES GRATIFYING.

At this time when sales and profits in many lines of drug store merchandise are reduced, due to average smaller sales and the large number of so-called loss leaders, it would seem especially good business to concentrate efforts on one's prescription and other professional or public health departments.

The prescription volume is by no means a negligible part of total sales, and concrete evidence of this is brought out in preliminary figures available for 11 of the 13 commercial stores showing over 16 per cent of the sales are accounted for by prescriptions.

The sales figures just quoted do not include other merchandise of a prescription department of professional character such as biologicals, crude drugs and other items, the sales of which normally might be credited to the prescription department.

#### PRESCRIPTION DEPARTMENT BUSINESS OTHER THAN PRESCRIPTIONS.

In order to ascertain the extent of prescription department business other than actual prescriptions, a check was made for two months in one of the stores being studied of all sales of bulk drugs, chemicals, galenicals and other merchandise ordinarily stocked in the prescription depart-

ment and dispensed by a registered pharmacist. It was found that there was a daily average of 37 sales at 27 cents each or \$10.10 per day. Or it might be stated that based on this particular store at least 25 per cent more must be added to actual prescription business, to obtain the total income of the prescription department.

This business should be profitable and moreover accounts, along with the manufacturing that takes place in the prescription department, for a considerable portion of the prescription clerks' time.

It has been said that the larger the number of prescriptions filled the greater the average price. The results of the St. Louis study do not altogether verify this statement, although there is a tendency in this direction. It was thought that when the results from the final store (a professional prescription store) to be studied was in, that perhaps the statement referred to above would check to a greater degree. However, despite the fact that this particular store charges very reasonable prices, and likewise fills a much greater number of prescriptions calling for expensive domestic and imported specialties, its prices were lower than those charged by the 13 usual commercial type stores. The average price charged for the 23,963 new prescriptions analyzed in the 13 usual commercial type stores was \$0.92. The lowest average price charged was \$0.82 and the highest \$1.03.

The average price charged for narcotic prescriptions was \$0.97 each, as against 0.91 for non-narcotic prescriptions. However, three of the stores charged less for narcotics.

#### PRICES OF OFFICIAL COMPARED WITH NON-OFFICIAL PRESCRIPTIONS.

The 20,533 non-narcotic prescriptions and 3430 narcotic prescriptions were further subdivided into three classes, namely (1) official U. S. P., or N. F., (2) proprietary or manufacturer's specialties, (3) mixed or a combination of official and proprietary.

It was disclosed that in the non-narcotic group the average price charged for prescriptions consisting exclusively of specialties was \$1.02 or more than 21 per cent greater than the official prescriptions, the average price of which was only \$0.84. The combination prescriptions averaged \$0.93 or are 10 per cent more than the official. The most popular price charged for the prescriptions studied was \$0.75 and occurred in 4434 prescriptions or 18.50 per cent of the total. There were only 248 prescriptions or 1.03 per cent of the total, priced in excess of \$2.00.

#### APPROXIMATELY THREE PER CENT OF PRESCRIPTIONS PRICED UNDER FIFTY CENTS.

In connection with the subject of prices, it is interesting to note that 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, 81 per cent were non-narcotic and 19 per cent were 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 a minimum compounding fee.

#### RATIO OF OFFICIAL PRESCRIPTIONS LARGER THAN GENERALLY BELIEVED.

Contrary to some opinion that 50 per cent of all prescriptions call for proprietaries or specialties, our analysis of approximately 24,000 prescriptions shows that only 25 per cent called for manufactured specialties alone, while 50 per cent called for official ingredients, that is, drugs or preparations listed in the United States Pharmacopœia or the National Formulary, and the remaining 25 per cent called for a combination of official and specialty drugs or preparations. For the narcotic prescriptions the official average was even greater, accounting for 58 per cent, specialties only two per cent and mixed 40 per cent.

#### FREQUENCY OF INGREDIENTS USED IN PRESCRIPTIONS.

The study of the frequency of ingredients occurring in the prescriptions will perhaps prove the outstanding piece of information brought out by the prescription study. This material will be placed at the disposal of the United States Pharmacopœia and National Formulary Revision Committees. This subject is considered of most vital importance to all branches of pharmacy, as the manufacturer and the wholesaler are very concerned in any economic loss which is suffered by retailers and for that matter wholesalers, due to the excessive cost of handling the innumerable slow moving prescription items.

The result of the frequency of ingredient study for 8 of the 15 prescription departments being studied is partially complete. A total of 15,063 prescriptions were studied, and the number of different ingredients used in filling these prescriptions numbered 1746. Average figures for the 8 stores show that 608 different ingredients, would be required to fill 1883 prescriptions. Of the 608 ingredients, only 92 or 15 per cent occurred more than 10 times. The remaining order of occurrence was as follows: 241 ingredients had an occurrence of only one; 93 occurred only twice, 53 occurred only three times, 38 occurred four times, 22 occurred five times, 19 occurred six times, 17 occurred seven times, 14 occurred eight times, 9 occurred nine times, 10 occurred ten times.

LEADING INGREDIENTS OCCURRING OVER TEN TIMES IN ANY ONE STORE USED IN COMPOUNDING PRESCRIPTIONS.

It was previously stated that the ingredients occurring more than ten times numbered only 92. However, these were average figures. Actually when compiling and assembling these ingredients for each store we find that we have 234 different ingredients occurring over ten times in the 15,063 prescriptions studied in all the eight stores. It would naturally be expected that the variety in items stocked would increase with the number of prescriptions filled, or business done. However, the ratio of two and one-half times seems outstandingly high compared with a proportionate increase in other departments of the drug business or for that matter almost any other business. The 234 ingredients were divided as follows: Chemicals 81 or 35.0 per cent, galenicals and miscellaneous 82 or 35.0 per cent, and proprietaries 71 or 30.0 per cent.

A number of the leading chemicals and galenicals in order of their importance with the number of times they occurred in 15,063 prescriptions were as follows: Distilled water 1466, acetylsalicylic acid 992, codeine sulphate 858, acetphenetidin 908, sodium bromide 628, sodium bicarbonate 567, sodium salicylate 559, caffeine citrate 534, sodium benzoate 490, phenol 580, ammonium chloride 427, glycerin 407, elixir digestive compound 372, potassium iodide 350, tincture of nux vomica 310, peppermint water 309, syrup of wild cherry 307, codeine phosphate 301, milk of magnesia 296, phenolphthalein 296, caffeine 294, elixir of lactated pepsin 269, tincture of belladonna 266, acid boric 263, bismuth subnitrate 238, syrup of tolu 229, simple syrup 204, tincture of digitalis 203, milk sugar 199, salol 194, potassium citrate 190.

The 82 leading ingredients among the 239 items prescribed over ten times, included 62 chemicals and galenicals, the bulk of which were official, that is, U. S. P. or N. F., the remaining 20 items were proprietaries.

MODEL PRESCRIPTION DEPARTMENT.

It is hoped that something more concrete will come out of the professional phase of the survey than just a few printed reports. Pharmaceutical and chemical manufacturers as well as wholesale druggists, have suggested that a tentative plan be drawn of a model prescription department for the usual commercial type pharmacy, the stock to be based on the ingredient study of the ingredients occurring in the approximate 24,000 prescriptions studied in the 13 commercial type stores. Leaders of pharmacy have expressed great interest and, providing satisfactory arrangement can be made, have offered space to set up this hypothetical prescription department.

No attempt at this will be made to outline the benefit that would accrue to professional pharmacy, if this plan can be successfully carried out. However, it must be only too apparent. Needless to say it would among other things show the investment required, the respective cost of chemicals, galenicals, proprietaries, etc. It would furnish the basic material around which could be planned the most efficient and convenient arrangement of the prescription stock and the space required for its placement. The stock arrangement would of course be based on the frequency with which the ingredients occurred in the study. Those occurring the most would be placed most convenient to the prescription counter. The space for equipment and containers would be allocated according to the form shown in the 24,000 prescriptions studied.

Among other uses it would serve as an indicator for the pharmacist giving his opening order of prescription stock and equipment. The novice proprietor frequently over-buys on his opening order of prescription department stock and equipment.

It is also desirable that the execution of the plan would solve the problem of separating from the prescription room the following: Clerical and bookkeeping activities, unpacking and checking incoming goods and the storage of soda fountain syrups, fruits and bottle beverages, as well as the manufacture of salads, sandwiches and other fountain foodstuffs.

It is extremely difficult for a pharmacist to win the confidence of a physician and build up a profitable doctor-pharmacist relationship, if the prescription room resembles a composite warehouse, kitchen and untidy office rather than a laboratory where he fills prescriptions, and carries on other activities requiring professional skill and knowledge.

#### PRESCRIPTION DISTRIBUTION AMONG PHYSICIANS.

Some information regarding the extent that the prescriptions studied were divided among different physicians is available for 7 of the stores. For example, out of 2000 prescriptions studied in one store, three doctors contributed 78 per cent. The maximum for which any one doctor was responsible in any one store among 6 others for which figures are available was 40 per cent, 26 per cent, 20 per cent, 18 per cent, 13 per cent and 12 per cent, respectively.

Physician's prescriptions are very important. One can readily realize that in those stores where the prescription sales represent a substantial portion of total sales and where a few physicians contribute the bulk of prescriptions filled, the store might have to close its doors, if one or two of these physicians should cease to practice or move to another location.

*Form.*—We find that of the 23,963 new prescriptions analyzed, 61 per cent were liquid. Capsule prescriptions accounted for 17.5 per cent; tablets accounted for about 10 per cent; ointments approximately 4 per cent; divided powders, 3 per cent; bulk powder, 1.7 per cent; pills numbered about 1 per cent; effervescent salts about 1.4 per cent; suppositories together with lozenges, ampuls and other forms accounted for the remainder, or four-tenths of one per cent.

*Size of Capsule Not Indicated.*—The prescription analysis brings many interesting angles of prescription filling to light, for example, the capsule count revealed that the pharmacist only indicated the size of the empty capsule used in 1157 out of 4197 capsule prescriptions or an average for all stores of 27.6 per cent. The metric system was employed in writing 7.65 per cent of the approximately 2400 prescriptions analyzed.

#### LEGIBILITY OF PRESCRIPTIONS.

The pharmacist proprietor is not only liable for the accuracy of these prescriptions that he himself fills, but is likewise liable for any error on the part of his employees registered or otherwise. The prescription analyses show that the handwriting was good in 20.9 per cent, fair in 76.0 per cent and poor or illegible in 3.1 per cent of the prescriptions studied. This fact proves every owner or manager should check the accuracy of himself and all his clerks in filling prescriptions.

#### PRESCRIPTION INGREDIENTS.

The 23,963 prescriptions analyzed averaged approximately 2.5 ingredients per prescription. The non-narcotic prescriptions averaged 2.4 ingredients each, and the narcotic prescriptions averaged 3.2 ingredients each. This study further brought out that prescriptions with two or more ingredients accounted for approximately 64 per cent of the number studied. The popular impression that more prescriptions are filled in the winter than in the summer is confirmed in the prescription analysis. Out of an average of 3560 new prescriptions filled annually for thirteen stores, approximately 50 per cent are filled in the five months' period—December to April, inclusive. February is the peak month and accounts for twelve per cent of the total.

Over ninety per cent of 300 country druggists in Missouri and Illinois stated that they were filling approximately one prescription a day, or so few, that their prescription business was negligible and attributed it largely to the fact that the physicians did their own dispensing.

#### PROFESSIONAL WINDOW DISPLAYS.

Preliminary results of the survey traffic check or study would seem to indicate that only a small percentage of passersby are looking at drug store windows. Perhaps the remedy is to have fewer of the stereotype windows that are seen so frequently these days and substitute some educational or professional window displays that will not only impress the customers, but secure the good-will and cooperation of physicians as well.

Remember that in the last two to fifteen years, articles that you used to consider exclusively yours are to-day being sold in five and ten cent stores, beauty shops, department and other kinds of stores. However, prescriptions, biologicals and certain other scientific products may still be said to be the prerogative of the pharmacist. In addition to having an occasional

professional window, resurrect that old symbol of pharmacy—the show globe, or the gilded mortar and pestle or both—and display prominently.

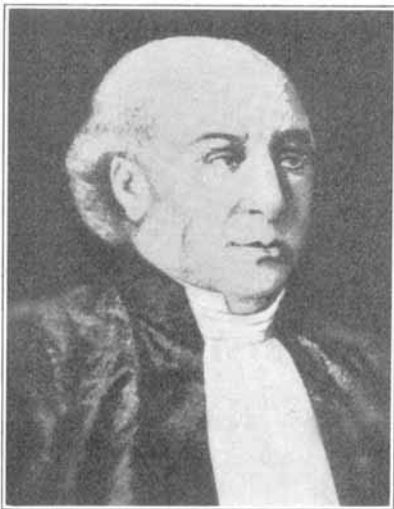
#### APPLYING THE FACTS.

Little attempt has been made to illustrate the value of all the facts presented, but the efficacy of facts is undisputed. An illustration of the practical application of the information being evolved from the study of the prescription departments is the following:

A large manufacturer of bottles and other glass ware 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. Based on the fact brought out in our analysis of form that 61 per cent of all prescriptions studied were liquid prescriptions, and occurred in the following order—4 ounces, 27.50 per cent; 3 ounces, 22 per cent; 2 ounces, 14 per cent; 1 ounce, 12 per cent; 6 ounces, 11.50 per cent;  $\frac{1}{2}$  ounce, 5.50 per cent; 8 ounces, 3 per cent; and all other sizes including 12, 16 and  $\frac{1}{4}$  ounce, 4.50 per cent; it was not only possible to state that ten of the thirteen stores studied could have used one or more of these deals in a year's time or less, but it was also possible to state the number of each size required.

#### CONCLUSION.

The facts related are only a few that have been ascertained as a result of the prescription phase of the National Drug Store Survey and it is hoped that they along with other information, contained in the first prescription report will serve to demonstrate that the income from strictly pharmaceutical operations is not only greater than is generally believed, but is capable of expansion. It is believed that this report will be available for distribution on or about April 25, 1932.



Left, Joseph Bienaime Caventou, right, Joseph Pelletier—French pharmacists—discoverers of Quinine in 1820.

“There can be coöperation only when the physician and the pharmacist feel that they are co-workers in the fight against disease, when each respects the other's special knowledge and qualifications, when mutual exchange of views will produce the satisfactory remedy for a particular patient upon whom both the physician and pharmacist are, at the moment, concentrating their attention.”—H. V. A.