

COMMITTEE REPORTS

THE PHARMACEUTICAL ASPECTS OF SOCIALIZED MEDICINE.

BY H. V. ARNY, PH.D.*

On January 9, 1933, at the mid-winter session of the general committees of the N. Y. S. Ph. A. President Miller appointed as a special committee on socialized medicine Messrs. Goldschmidt, Gesoalde, Seley and Arny. During the winter this committee held two conferences and transacted other business by correspondence. A final conference was held at Stamford, N. Y., on June 20th, and the following report represents the unanimous opinion of the committee after six months' study of the important and complicated problem.

The main task of the committee was a study of the now famous "Final Report of the Committee on the Costs of Medical Care." Explanatory and critical literature from medical and pharmaceutical journals and from the press has been scanned. Of importance, second only to the "Final Report" is the book "Medicinal Education," a report emanating from the Commission on Medical Education. From the mass of detail this afforded us, your committee has elicited the following facts.

REPORT OF COMMITTEE ON COST OF MEDICAL CARE.

This committee consisted of 50 members, medical workers, social workers, educators and business men. There were 15 practicing physicians, 2 dental surgeons and one practicing pharmacist (Mr. Ambrose Hunsberger of Philadelphia). The statistical work was conducted by a research staff of 13 experts, one of whom (Dr. Robert P. Fischelis of Trenton) is a pharmacist. The survey covered a period of five years and resulted in the publication of a number of statistical Bulletins and a "Final Report" which contains the "Majority Recommendations" (five in number). It also contains two minority reports, as well as a number of printed expressions of individual opinions. These recommendations and minority reports have been given publicity in the pharmaceutical press, hence at this time we will merely outline the committee recommendations (signed by all but 13 members of the committee) and the recommendations of the principal minority group. It is significant that this minority report is signed by 8 practicing physicians and one layman.

The Majority Recommendations may be condensed to the following excerpt, but it is only fair to us to urge that those interested read the full text of the recommendations as found on page XVI of the "Final Report" of the Committee.

1. Medical service should be furnished largely by organized groups: physicians, dentists, nurses, pharmacists, etc.
2. Recommendation that all basic public health services be extended so as to become available to the entire population.
3. Recommendation that the costs of medical care be placed upon a group payment basis: through insurance, through taxation or through both of these methods.
4. Recommendation that there be formed agencies (state and local) for the study, evaluation and coördination of medical service.
5. Recommendations as to improvements in professional education: of physicians, of dentists, of pharmacists, of nurses and nursing aids and of midwives. As to pharmacists, the education should "place more stress on the pharmacist's responsibilities and opportunities for public service."

The Principal Minority Report stresses the following:

1. Governmental competition in the practice of medicine should be discontinued and its activities should be restricted to the medical departments of the Army, Navy and other governmental agencies and to the various types of government hospitals.

* A report of the committee on socialized medicine of the New York State Pharmaceutical Association, presented to the Association at its 1933 meeting.

2. The Government should relieve the private practice of medicine from the care of indigents.
3. Approval of Item No. 4 of the Majority Report.
4. Restoration of the general practitioner to the central position in medical practice.
5. Recommendation that the corporate practice of medicine financed through intermediary agencies be vigorously opposed.
6. Recommends the trial of methods which can be rightly fitted into present-day practice without interfering with the fundamentals of medical practice.
7. Recommends the development by state and county medical associations of plans for medical care.

REPORT OF THE COMMISSION ON MEDICAL EDUCATION.

The book "Medical Education" prepared by this Commission under the leadership of Dean Rappleye of Columbia University School of Medicine discusses the education of physicians rather than socialized medicine. These two subjects are, however, so closely intertwined in present-day medical thought that much valuable information concerning the present trends of the practice of medicine are given. Of particular value are the 120 statistical tables giving present (1932) information concerning all phases of the practice of medicine. As the book came out at about the same time as the "Final Report" of the Committee on the Costs of Medical Care, the information given in one book supplements the other, while opinions upon the same subject as present in the two books sometimes exhibit marked differences. The book "Medical Education" is essentially a presentation of statistical information. Recommendations are few and informative. Some of these are summarized below:

1. Deplores self-medication, stating that this is "largely through patent medicines and home remedies supplied by the 60,000 drug stores of the country."
2. Aides used by the medical practitioner are (a) hospitals, (b) clinics, (c) nurses, (d) dentists, (e) optometrists, (f) midwives, (g) laboratory services, (h) dietetics. It is significant that nowhere in the list is pharmacy mentioned. It is further significant that the words "pharmacy," "drug" and "medicines" are not to be found in the index of the book.
3. Too much rigidity is demanded by law in the medical school curriculum.
4. Criticizes pharmacology courses for clinging "to the older type of teaching, including identification of drugs, compounding of prescriptions and other features of pharmacy."
5. Discussing therapeutics, the book states "there is less reliance placed now upon drug therapy than was the case in the past because the virtues claimed for many drugs have not as yet been demonstrated." Modern therapeutics emphasizes organ-therapy, vaccines, sera, radium, heliotherapy, etc.
6. Pharmacology teachers should emphasize the part played by patent medicines and nostrums in directing the public to medication without diagnosis.

THE RELATION OF PHARMACY TO THESE REPORTS.

As citizens, we are all deeply interested in problems relating to medical care. As members of the pharmaceutical calling, we have a sympathetic interest in the well-being of that fine group of professional men, the medical practitioners. As members of the N. Y. S. Ph. A., our retail pharmacists must ask the question, "Where do we fit in the plans outlined in the two reports outlined above?"

In the Rappleye Report, Pharmacy is treated with contemptuous neglect. This report is a typical example of the therapeutic nihilism that has pervaded the minds of the medical teachers during the past quarter-century; a situation that may be condensed to the aphorism: diagnosis everything, treatment nothing. Medical students of to-day are trained to accurately diagnose a disease and are then left to flounder as far as treatment is concerned. This floundering finally lands the young physician into the arms of the "ethical private formula" manufacturer and thus is started the prescribing of proprietaries and the self-medication on the part of the public which medical publicists so deeply deplore.

There is, in truth, no message of hope for Pharmacy in the Rappleye Report.

In the *Bulletins of the Committee on Cost of Medical Care*, there is much material for study by us pharmacists. The book, "The Costs of Medicines," by Drs. C. Rufus Rorem and Robert P. Fischelis (*Bulletin No. 14*) should be read by every retail druggist, since it gives us information, statistical and otherwise, concerning the present condition and trends of retail pharmacy that few of us have realized. It seems to your committee quite unfortunate that so little of the material in Dr. Fischelis' book was utilized by the medical care committee in its Majority Report.

This Majority Report considers Pharmacy from two angles. One is in the shape of the year-long propaganda of the American Medical Association against proprietary medicines. In our reading of this portion of the Majority Report, your committee fails to note mention of one of the primal causes of the "nostrum evil" of to-day, the evolution of which may be traced through the following steps: (a) therapeutic nihilism in medical schools, (b) ignorance of young physicians as to rational prescribing, (c) recourse to the manufacturers of "ethical proprietaries," (d) the "ethical proprietary" of to-day becomes the advertised "nostrum" of to-morrow; at times, with the printed boast "prescribed by 50,000 physicians."

As to the pharmacy in which we are interested, the prescription business of our retail pharmacies, the Majority Report gives us cold comfort. The frank recommendation of the majority of the medical care committee is that medical practice of the future be concentrated in medical centers or in private group clinics. We pharmacists know what step-motherly treatment the average hospital pharmacist receives from his medical superiors. We know that in most hospital groups "low pharmaceutical salaries" and "cheap drug supplies" are the slogans. One of us has personal knowledge of one of the best hospitals in a large western city, where the gifted pharmacist and his staff are tucked away in the dark basement next to the hospital kitchen. This situation is evidently designed to emphasize the statement of Sir Thomas Bulleyn (16th Century) that the apothecary is the physician's cook. If the proposed medical plans of the "Majority Report" go through; if all of the 120,000,000 people in the United States have to go to hospitals and private clinics for medical treatment; if the independent medical practitioner is to go to the wall, then the independent pharmacist is doomed to extinction.

Of course, the extremists of the medical care committee are not to have their way. We have already mentioned that the principal minority report of the medical care committee is signed by eight out of the fifteen practicing physicians on the committee and discussions during 1933 at state and local medical society meetings indicate a vigorous opposition on the part of the rank and file of medical men in general practice against such socialistic propositions.

This fight should be waged upon the basic proposition: shall the individual practitioner be destroyed for the aggrandizement of the few, who shout the battle cry "For the Public Good?" It is obvious to us that this battle will be fought by the individual medical practitioner and that we pharmacists need not worry as to the outcome; at least for fifty years to come.

Where, then, does Pharmacy come in? In our opinion, in the comparatively near future pressure will be brought to bear by the groups interested in this "Cost of Medical Care" movement to limit the practice of pharmacy more and more to the compounding of prescriptions and to the sale of drugs, medicines and poisons. All of us have given voice to this program as the aim of ideal Pharmacy. The cold facts as presented in the Fischelis Bulletin and extracted from other sources of information indicate that all of the prescriptions written by the physicians of the United States (165,000,000 prescriptions) distributed among all of the drug stores of this country (60,000) means 2780 prescriptions per annum, or 8 per day per drug store. This means 4 prescriptions per day per registered pharmacist. Other statistical data indicate that hasty, thoughtless and speedy legislation of restrictive character would tend to put 80 per cent of our drug stores out of business.

Your committee is ready to concede that pharmacy is overcrowded, but in these days all callings are overcrowded. Significant is one of the tables presented in the Rappleye Report. It will be recalled that the avowed object of the greatly increased requirements set for admission into medical schools in or around 1910 was to stop overcrowding in the medical profession. The Rappleye statistics show that between 1906 and 1920 the number of medical graduates in the United States dropped from 5364 to 3047 and that from 1920 to 1932 the graduate figure increased from 3047 to 4936. This is of course far more than the percentage increase in population. It is of great interest to note that during the past five years while the highly restricted medical courses

have produced an almost 60 per cent increase in medical graduates, the less restricted pharmacy courses have produced a decrease in graduates approximating 40 per cent.

A PROGRAM FOR PHARMACY.

What can Pharmacy and this Association do to meet this very serious issue?

Your committee offers the following suggestions:

1. *Pursue a "Laissez faire" Policy.*—This would be suicidal. The pharmacist of the Province of Ontario overlooked the passage in 1932 of certain "medical relief regulations" by the legislative device known in Canada as "Order-in-Council" and awoke to find that this legislation included a health insurance clause providing that physicians furnish for appropriate compensation not only medical services but also necessary medical supplies. A deputation from the Ontario Retail Druggists' Association called upon the Minister of Public Works and Labor, Dr. Monteith, who was unmoved by the plea of the druggists that "the necessary medical supplies" should be furnished by pharmacists. As the *Canadian Pharmaceutical Journal* puts it:

The medical relief regulations were drawn up without the slightest regard for the retail druggists.

They have been left out of the picture entirely.

2. *Join Physicians and Dentists in Fighting the Proposed Plans.*—Two warnings should be sounded in this connection. The three branches of medical service; the physician, the dentist and the pharmacist; must be careful in planning their line of attack. In the first place, among those of the medical costs committee who back the "Majority Report" are included a number of outstanding laymen distinguished for their altruistic interest in philanthropy and social service. Before legislative committees, members of this group command respectful attention because of the past records of disinterested social service. Their arguments that the proposed legislation is intended for the general good of the vast group of inarticulate poor, will be hard to meet. To oppose these arguments by tearful tales of doctors, dentists and druggists who will be reduced to penury, true though it may be, will scarcely serve the need of vigorous opposition. The following remarks on the subject made to medical men by Dr. Lewellus F. Barker of Johns Hopkins University are significant:

I want to warn my colleagues in the profession against too negative an attitude. This world is not static. This world is changing all the time. The medical profession must change with the rest of the world and keep pace with it. The negative attitude of our English and German *confrères* was very disastrous to the medical profession. That negative attitude did not prevent the development of health insurance in England and Germany. It put the doctors in a very false light. It excited public hostility against men whom the public were led to believe were acting from a selfish attitude rather than from a public spirited attitude; and, worst of all, the medical men lost their influence and leadership and had very little to say about the patterns of insurance that were established.

A second warning is addressed by your committee to pharmacists only and that concerns their relations with their medical *confrères* on the question of meeting the proposed legislation. Cooperate cordially with the medical men and dental groups only when these groups give definite promises of backing the modifications proposed by Pharmacy. The Majority Report (page 135) recommends

The appropriate medical, dental, nursing and pharmaceutical societies should appoint committees to ascertain the facts regarding the provision of medical service, to study the various possibilities for extending the service and to prepare local and state plans accordingly.

Our association through its legislative committee or through our committee on socialized medicine should take immediate steps to secure a conference with similar committees of the State medical, dental and nursing societies, in order to frame a suitable program of coöperation in preventing drastic legislation on the subject of socialized medicine.

3. *Formulate Plans for a Conservative Type of Health Insurance.*—National Health Insurance has been in force in Great Britain since 1911 and while the plan met with violent opposition at the time of its inception, we learn from English friends whose opinions are much valued, that the project has given fairly satisfactory results. The following information as to the British Act was furnished by Mr. Thomas Lewis in 1931 and was published in the A. PH. A. JOURNAL of that year:

"I have mentioned the National Health Insurance Act and would like to give some idea of this. It was instituted in Britain in 1911 and under it all persons in employment not earning more than a certain wage must be insured against sickness. Each week both the employer and employee pay a certain fixed sum into the Insurance Fund by means of affixing a stamp to a card supplied to each employee by the Government Department concerned; the employer deducts each week a sum (I believe about 18 cents) from the wage paid, adds to it his own payment and purchases an insurance stamp from the post-office for the total amount and fixes it to the card, canceling the stamp for further such use by dating it. The Government increases this amount by a further contribution of its own and this builds the National Health Insurance Fund. From this the employee obtains free medical treatment when sick and if unable to attend his work a certain weekly payment as well. Additional benefits added of late years are the supply of artificial teeth, spectacles and surgical appliances when prescribed by the physician. Suggestions have been made whereby the family of the insured person will also receive the same treatment at some future time by an adjustment of the Act.

"The medical attention and the supply of medicines work in this way. The insured person is required to register with a physician who receives a payment of about two dollars per annum per insured person registered with him, whether he attends to the insured individual every day of the year or even if no medical attention is given at all. The physician, when necessary, writes a prescription which the sick person takes to any pharmacist on the Government Panel, and in this way receives what is prescribed, payment being made to the pharmacist by the Government through one or other of its Insurance Committees. It may be noted that no patent medicine or proprietary articles may be prescribed by the physician for insured persons. Payment is made to the pharmacist after the prescriptions have been priced by a pricing committee which proceeds to do the pricing for each drug separately according to an agreed National Price List, then adding to the total the dispensing fee which varies according to whether it is a mixture, ointment, gargle, etc., which has been prescribed. It is the duty of the Retail Pharmacists' Union to arrange these prices with the Government."

Mr. Hugh N. Linstead, secretary of the Pharmaceutical Society of Great Britain, has been good enough to furnish us the following additional information concerning the operations of Health Insurance in his country:

1. The British Medical Association informs me that 49.4 per cent of the medical practitioners of Great Britain are panel practitioners. They divide the medical practitioners into the following classes:

Consultants.....	7.5 per cent
Practicing as dentists.....	1.1 per cent
Insurance general practitioners.....	49.4 per cent
Non-insurance general practitioners.....	22.9 per cent
Whole-time officers of local government bodies, etc....	14.6 per cent
Unclassified.....	4.5 per cent
	100.0 per cent

2. As there are roughly 17,500,000 insured persons and 17,500 insurance practitioners the average number of insured persons for whom an insurance practitioner is responsible is 1000. At present the insurance practitioner is suffering from

a 10 per cent National economy cut in his payment and receives 8/1¹/₂d. per annum for each insured person for whom he is responsible instead of the basic capitation fee of 9/-. The average annual compensation is therefore £406. 5. 0.

3. About 99 per cent of the chemists' shops are on the Insurance Panels. The number in England and Wales is approximately 10,473. The number in Scotland is approximately 1300.

4. The average income for each shop is about £200 per annum, representing about 3/- for each insured person.

Mr. Linstead also answered four questions as to the premiums paid by those workers who are beneficiaries of Health Insurance. He also kindly furnished us with a copy of the 32-page Bulletin of the Ministry of Health giving details of operation of the Health Insurance scheme. These data will be shown inquirers on request. In studying the above outline of British Health Insurance, it must be borne in mind that this insurance scheme applies to only 17,500,000 of the 44,000,000 inhabitants of Great Britain. According to first-hand information obtained by us, the Health Insurance payments to the retail pharmacist go a long way toward covering the overhead of the "chemist shop" and the purchases of the 26,500,000 uninsured furnish a reasonable income to the approximately 12,000 pharmacists of Great Britain.

CONCLUSION.

The foregoing lengthy recital may be summarized as follows. Above we have discussed:

1. Data from the Report of the Committee on Cost of Medical Care.
 - (a) Majority recommendations of the Committee.
 - (b) Principal minority report.
2. Report of the Commission on Medical Education.
3. Relation of Pharmacy to these reports.
4. A program for Pharmacy.
 - (a) Pursue a "*laissez faire*" policy?
 - (b) Join physicians and dentists in fighting the proposed plans?
 - (c) Formulate plans for a conservative type of Health Insurance?

This section of the report gives data concerning the operation of Health Insurance in Great Britain since 1911.

Organized pharmacy must be prepared not so much to fight the propositions outlined above as to see that adequate provisions of protection are given to our calling. The one encouragement that one obtains from a study of the situation is that the fate of the average practicing physician and of the practicing dentist is as much at stake as is that of the practicing pharmacist. The situation calls for organization in every county in the state of "professional guilds" such as Kings County has conducted with such distinct success during the past few years.

A secondary item is the proposition made last winter that a law be passed (a) limiting the sale of all medicines (patent and otherwise) to registered pharmacies; (b) prohibiting the sale of food, tobacco, etc., in registered pharmacies. Our direct information is:

1. That this type of legislation will not be hurriedly pushed through the legislature.
2. That one or two years of educational effort will be carried on prior to the introduction of the legislation.
3. That such legislation is bound to come up eventually.
4. That the project has been assured of ample financial backing.
5. That the group behind the movement is more than willing to cooperate with existing pharmaceutical organizations.

This matter is worthy of the careful attention of all of us having the interest of Pharmacy at heart.

THE PROFESSIONAL PHARMACY.

AN ANALYSIS OF PRESCRIPTION DEPARTMENT ACTIVITIES.

BY FRANK A. DELGADO AND ARTHUR A. KIMBALL.

(This analysis of Prescription Department Activities is part of the National Drug Store Survey and published under and by authority of the U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce. The table of contents will acquaint the readers with the valuable information on professional pharmacy contained in the report; information that has never before been given and offers studies of the various phases of the important subject for the pharmacists and students in colleges of pharmacy.

It is contemplated to print the report in four instalments. In due time notice will be given of the opportunity to secure reprints and it is suggested that readers make inquiry by addressing THIS JOURNAL as to how these reprints may be obtained, and the advantageous cost, if ordered in advance of completion of the report. Further information is given in the Foreword.—*Editor.*)

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FOREWORD.

With the ever-increasing trend toward specialization in most fields of endeavor, it is not surprising to find in the retail drug field a specialist—the professional pharmacy. These establishments, in which the entire attention is centered on prescriptions, and other commodities and services devoted to the public health, are said to be growing in number, particularly in locations in which offices of physicians are concentrated. A concentrated group of physicians naturally is the source of a large volume of prescriptions, sufficient to keep several pharmacists busy. The many items of rare occurrence called for require a much more complete stock than is generally carried by the usual commercial type drug store. Often prescriptions which are very difficult to fill, and which require unusual skill and fairly frequent practice, are received. In the professional pharmacy such prescriptions can usually be delegated to a pharmacist who fills such prescriptions fairly frequently. A large prescription staff is also needed to supply the exacting service requirements of the physicians—prompt collecting of prescriptions and sufficient telephone equipment to receive prescriptions by telephone, prompt filling of prescriptions in spite of the large volume, prompt and special delivery service, keeping at hand information to answer physicians' questions in regard to new specialties and the like. Thus, there are many reasons justifying the strictly professional pharmacy. It is as important a part of any "medical" building or other concentration of physicians, as is the prescription compounding laboratory in a modern hospital.

Therefore, in order to obtain a complete picture of the prescription filling activities of pharmacy, this study of the professional pharmacy was included as an integral part of the National Drug Store Survey. The value of the information contained in this report is not believed to be confined to the proprietors of professional pharmacies. It contains much information which should be of practical value to the proprietors of commercial type drug stores, in increasing their volume of prescription business and the profit possibilities of their prescription departments. Professors and students in colleges of pharmacy may find herein answers to some of the questions

about which there has been conjecture. Drug wholesalers and manufacturers of pharmaceutical supplies should find the list of leading ingredients, which was compiled after an analysis of 20,000 prescriptions, of particular interest. Pharmacists who are contemplating the operation of a professional pharmacy will find certain information particularly directed to them. It is hoped, therefore, that all branches of the drug profession and trade will be in some way aided by the information presented in this report.

This report on the varied activities of the professional pharmacy is the second report from the National Drug Store Survey concerning the prescription department activities of the retail drug trade. The first report, published in 1932, was entitled "Prescription Department Sales Analysis in Selected Drug Stores," and concerned the professional activities of 13 commercial type drug stores in St. Louis, Mo.¹

This present report on the activities of the professional pharmacy is to be printed in the JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION in several instalments, starting in the July 1933 issue. It will then be made available through the office of the secretary of the AMERICAN PHARMACEUTICAL ASSOCIATION.

The proprietors of the various professional pharmacies analyzed herein kindly made available the records of their establishments, and the AMERICAN PHARMACEUTICAL ASSOCIATION (particularly E. F. Kelly, secretary of the ASSOCIATION, and E. G. Eberle, editor of the ASSOCIATION'S JOURNAL) made possible the publishing and distributing of the report. This study was made in the Merchandising Research Division of the Bureau of Foreign and Domestic Commerce, under the direction of H. C. Dunn, chief of that division, and Wroe Alderson, director of the National Drug Store Survey. Miss Ruby M. Sanders of the above division rendered valuable assistance in tabulating material contained herein.

INTRODUCTION.

The purpose of this report is to present a complete picture of the professional pharmacy—the pharmacy which centers its attention almost entirely on prescriptions and other items related to public health. A study of the professional pharmacy is a necessary part of any complete analysis of the retail distribution of drug store commodities and services, such as has been undertaken in the National Drug Store Survey.

Of course, comparatively speaking, there are few professional pharmacies in the country. The actual number is a debatable question. However, Dr. C. B. Jordan, dean of the School of Pharmacy, Purdue University, who has made studies of professional pharmacies for a number of years and who is thus one of the best qualified to answer the question, places the number at slightly less than 400. One well-known trade journal has recently, at great effort, compiled a list of the 3200 largest prescription drug stores in the United States. But it is not stated that these 3200 stores are necessarily professional pharmacies. In any event, the number is not a large part of the approximately 60,000 retail drug stores in the United States.

As for a definition of the term "professional pharmacy," there would undoubtedly be differences of opinion. Would only stores in which the entire volume consisted of prescriptions and other items related to public health be included, or would stores which enjoyed both a large prescription business and a large business of a commercial type be included? Or, again, would stores with a small prescription business, but which had the definite purpose of building up only the professional phase be considered professional pharmacies? For the purpose of this report, only those pharmacies in which the majority of the business is in prescriptions, and in which only the professional phase is promoted will be considered professional pharmacies. If half of a store's volume is in prescriptions, it is probable that the store is filling a sufficiently large number of prescriptions daily to be classed as a professional pharmacy. The fact that a professional pharmacy has a soda fountain, or carries cigars and cigarettes, as a convenience to its patrons, should not rob the pharmacy of its professional character, as long as these lines are carried strictly as a matter of convenience. Particularly for professional pharmacies located in professional buildings, it is sometimes necessary to have a soda fountain and the like for the convenience of the physicians and others who frequent the building. However, none of the four St. Louis professional pharmacies which form the basis of this report had soda fountains.

¹ Available at office of Superintendent of Documents, Washington, D. C.

Four professional pharmacies located in St. Louis, Mo., were the test laboratories in which this detailed analysis was made. A large phase of this study was centered around a complete analysis, from every practical point of view, of 10,000 prescriptions filled by two of these four pharmacies. Also, wherever such information would be of interest and value, the findings in the professional stores are compared with those of the 13 commercial type drug stores analyzed in the first report on the professional phase of the National Drug Store Survey. Ten thousand prescriptions filled by the commercial type stores are analyzed and compared with the 10,000 prescriptions filled by the professional pharmacies. In addition to this material, a questionnaire containing 65 questions was sent to a large number of proprietors of professional pharmacies and was answered in full by 35 professional pharmacists. These questionnaire replies add a great deal to the supply of information concerning the professional pharmacy, and make it possible to present an even more complete picture than was at first contemplated.

To give an idea of how "professional" the pharmacies included in the survey are, it might be stated that in the four St. Louis pharmacies, over 73 per cent of the total volume was in actual prescription business, these stores averaging from 112 to 219.4 prescriptions each per day, exclusive of liquor prescriptions. The 35 "questionnaire stores" had an average of 63 per cent of the total business represented by prescriptions, and averaged 73 prescriptions each per day. These figures might be compared with those of the 13 commercial type stores analyzed in the first report on the prescription phase of the Survey, which averaged only 15.3 prescriptions each daily, exclusive of liquor.

Various estimates of the total number of prescriptions filled in the United States annually have been made, ranging from 120,000,000 to 300,000,000. A recent exhaustive private survey placed the number at close to 165,000,000, including refills. This would mean that the 60,000 retail drug stores in the United States fill an average of less than 8 prescriptions each per day. However, as there are many pharmacists who make no special effort to obtain prescription business, and in fact many drug stores filling an average of as few as one prescription a day, there are many times eight prescriptions a day available to those pharmacists who strive for prescription business. Taking the average prescription business of the professional pharmacy as that reported by the 35 questionnaire stores, 73 prescriptions per day, and using Dr. Jordan's estimate of the number of professional pharmacies in the country, slightly less than 400, it can be estimated that between 10,000,000 and 11,000,000 prescriptions are filled annually in professional pharmacies. This would mean that professional pharmacies, less than 1 per cent of the total number of retail drug stores, fill between 6 and 7 per cent of the 165,000,000 prescriptions filled annually in the United States.

From the solely business viewpoint, the operation of the professional pharmacy would appear to be a profitable venture. The four St. Louis professional pharmacies studied had annual sales volumes averaging over \$107,000 each, on which they averaged over \$10,000 net profit each. Of course, St. Louis is a large city, and is outstanding in the way its physicians and patients support professional pharmacies, but the study in these four stores at least shows the possibilities of profit in prescription business when a store is able to maintain a large enough volume to operate as a professional pharmacy.

The number of professional pharmacies in the United States is slowly increasing, and it is believed that in the future the trend will be toward an even larger number of these pharmacies, with an increasing proportion of the total prescription business handled by professional pharmacies. One reason for this conclusion is the inauguration of the four-year course in colleges of pharmacy, effective as of this year. It hardly seems reasonable that students will continue to enroll in colleges of pharmacy in the same number as heretofore with no higher object in view than the opening of the usual commercial type drug store. Also, in addition to the professional prestige to be gained, there are a number of monetary reasons which will cause many pharmacists to prefer to operate a professional pharmacy. For one thing, the competition is not as great, for the present at least. There is less chance of encroachment by other types of establishments, such as grocery stores and department stores. Also, the hours in the professional pharmacy are inclined to be shorter than in the commercial type drug store. The majority of the 35 "questionnaire" professional stores opened at 8:00 A.M. and closed at 10:00 P.M. on week days and had average Sunday hours of from 9:00 A.M. to 8:00 P.M., but some of those stores had even shorter hours.

Naturally, the number of professional pharmacies will always be limited. Small towns,

and towns and cities where there is considerable dispensing on the part of physicians, will not present a good location for the embryo professional pharmacist. The proprietors of the 35 "questionnaire" stores estimated, on the average, that 20,000 people was the minimum population necessary to support a professional pharmacy. However, half of these 35 proprietors believed that 10,000 or less was a sufficient population for this purpose. Of course, a concentration of physicians' offices, particularly in a "medical" building, will always offer a fine opportunity for the establishment of a professional pharmacy. In an eastern city, for example, there are three "medical" buildings located within a space of two blocks, and each of these three buildings supports a professional pharmacy. However, there are examples of very successful professional pharmacies located quite some distance from the district where physician's offices are centered. Such is the case, for example, in Baltimore, Washington, New York, Detroit and St. Louis. St. Louis possesses two professional pharmacies located far from the "medical" buildings, yet both stores have a big prescription business and stand high in the esteem of physicians.

A professional pharmacy cannot be developed merely by having beautiful fixtures, a complete stock and delivery and other equipment. The professional pharmacist, probably to a greater extent than his more commercially minded brother druggists, will have to go out and bring in business. The methods employed by the professional pharmacist, it is true, will be different. They will be dignified and professional, and in the main will consist in calling on physicians to win their friendship and inspire their confidence. Of course, the prospective operator of a professional pharmacy must first select a suitable location, and must obtain a well-rounded stock, the basis of which may be the list of leading ingredients included in this report.

Among the factors responsible for the success of professional pharmacies are the following:

1. Knowledge and judgment, skill, experience, honesty, diligence, courtesy and personality of both the proprietor and his staff.
2. Physicians' support, coöperation, confidence and friendship.
3. Location, accessibility to physicians.
4. Store arrangement, appearance and cleanliness; adequate equipment.
5. Careful buying; quality, variety, purity and freshness of stock.
6. Accuracy in filling prescriptions; reasonable prices commensurate with quality and service; factors of selling.
7. Dependable service, every possible facility, such as sufficient telephone equipment, rapid calling for and delivery of prescriptions, prompt filling of prescriptions, prompt attention to mail orders, keeping new foreign and domestic preparations in stock.
8. Proper advertising and promotion, such as continual contact with physicians, meeting with and speaking before physicians and internes, furnishing prescription blanks.
9. Administrative ability—bookkeeping, adequate records, annual inventories and profit and loss statements, careful extension of credit, prompt collection of bills.

Nearly all of the factors enumerated above embrace the two outstanding phases of merchandising, cost control and sales promotion, in addition to the professional requirements. Thus, the proprietor of the professional pharmacy must be a good merchant, a capable business man, as well as a trained professional man. It is certainly true that in most cases the proprietors of professional pharmacies are leaders in the profession of pharmacy in their respective cities, and in some cases are national leaders in their profession. Professional pharmacists seem to be fairly young at the time they open their stores. Seventy-one per cent of the 35 pharmacists answering the questionnaire were younger than 40 when they opened their stores; 38.7 per cent were under 30.

DESCRIPTION OF SURVEY STORES.

The four professional pharmacies comprising the test laboratories around which the major portion of this report is centered are located in the uptown business district in St. Louis, Mo. This uptown district is a busy business center, containing the theatrical center and many small shops. The four pharmacies are located within a space of two blocks, which fact does not seem to limit their sales volume, for all four stores had large volumes of business, averaging over \$107,000 each per year. Three of the four pharmacies are located in buildings which are almost entirely devoted to offices of physicians, dentists and members of allied professions. The surrounding nearby area has quite a few physicians' offices. Thus there is a justifiable reason for these professional stores to locate in this high-rent business district.

None of the four establishments handled candy, cigars, cigarettes and other products of a nonprofessional type, with the exception of a limited line of toilet goods and articles. The prescription business in these stores accounted for from 59 to 88 per cent of their total sales volume, the remaining volume being devoted to hospital supplies and other items related to public health.

Three of the four pharmacists were located on the ground floor, while the other was located on the second floor of a building devoted mainly to physicians' offices. As to the amount of space necessary for the operation of a professional pharmacy it might be stated that this would depend on the particular establishment. One of the St. Louis pharmacies has a floor space of about 985 square feet (41 by 24 feet) in the principal room. Of this space, about 240 square feet are used for prescription work, 175 square feet for customers' space and 120 square feet for office space. In adjacent rooms the pharmacy has about 700 square feet, of which about 150 square feet are used for manufacturing, 200 square feet for prescription files and the balance for lockers and storage. There is also a space of about 120 square feet in the basement for storage.

Another of the test stores has a room measuring 17 by 30 feet (150 square feet) on the first floor, devoted entirely to compounding, stock and a waiting room for customers. This store has 18 feet of counter space for compounding and a corresponding amount of shelf space running 6 feet above the counter. In the basement this store has a space 30 by 50 feet (1500 square feet) in size, of which 15 by 15 feet (225 square feet) is devoted to its laboratory and the balance used for storage.

Another test store has a space of 36 by 16 feet (576 square feet) in the main portion of the store. There is a 15-foot balcony in the rear, underneath of which is the store's prescription department space, about 15 by 20 feet (300 square feet), with appropriate shelving in every available space. In the center of this space is a 5-foot prescription counter and bookkeeper's desk (standing). There is also a 12-foot counter at the front of this space. The basement dimensions are the same as the floor above. There is a space at one end of approximately 225 square feet fitted with a laboratory table where all the heavy compounding and manufacturing is done. In addition, there is a hallway space of about 8 by 20 feet connecting the basement with an outside elevator, the larger portion of which is utilized for the storage of prescription ware, etc.

The other test store has a space of about 860 square feet (36 by 33 feet) with a 12-foot prescription counter in the rear. There is a width of 5 feet between the prescription counter and the wall cases in the rear. The office is on a balcony 15 feet long and extending out 8 feet from the wall. There is a 3-foot extension of the balcony around two sides of the store. The basement comprises 806 square feet, of which 120 square feet is used for manufacturing activities, and the balance for prescription files and storage.

Thirty-five professional pharmacists answering a questionnaire gave among other replies a statement concerning the size of their stores. The 35 pharmacies occupied an average of 1632 square feet, although the typical size was 1075 square feet. The largest sized store occupied 10,320 square feet; the smallest, only 308 square feet.

DESCRIPTION OF QUESTIONNAIRES ANSWERED BY 35 PROFESSIONAL PHARMACISTS.

Dr. C. B. Jordan, Dean of the School of Pharmacy of Purdue University, has conducted a study of professional pharmacies in each of the four years from 1929 through 1932. The material for these studies has been gathered by means of questionnaires sent to a fairly complete list of professional pharmacists throughout the country. For Dr. Jordan's 1932 study, one of the authors of this report was kindly permitted to prepare a questionnaire consisting of 66 questions with subdivisions making a total of 130 questions. Dr. Jordan sent this questionnaire to approximately 400 professional pharmacists, 40 of whom returned it. Only in the case of 35 of the 40 was the questionnaire answered nearly complete. These 35 questionnaire returns are used for the basis of the supplemental material for this report. The authors greatly appreciate Dr. Jordan's efforts and those of J. L. Weinland, extension worker, in the School of Pharmacy at Purdue University, who analyzed these voluminous questionnaires.

Various data from the questionnaire replies are inserted throughout the report wherever it is interesting and valuable to compare the findings in the four test stores with those in other professional pharmacies. A complete report on this questionnaire survey, containing the composite answers to each of the 66 questions, was published by Dr. Jordan in the November 1932 issue of the JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION. However, the answers

to most of the questions will be found in various sections of this present report, where references are made to the "questionnaire stores."

FIXTURE AND PRESCRIPTION INVENTORY REQUIREMENTS IN OPENING A NEW STORE.

The fixture investment was only ascertained for two of the four survey test stores. Store A in 1930 valued its equipment at \$2912 and in 1931 at \$1907, having written off \$1005 because of depreciation. This fixture investment will undoubtedly seem very small for such a professional pharmacy, but it should be remembered that store A has been in business for many years and the fixture investment shown gives the depreciated value. Store B valued its fixtures at \$6236 in 1930, and at \$5873 in 1931, having written off \$363 for depreciation. Store B is a fairly new store, and the fixture value shown is probably at a figure somewhat approaching the cost price when purchased.

The minimum fixture investment for 29 of the 35 "questionnaire" stores averaged \$5964, which seems high. The typical value, however, was \$3000. One professional pharmacist reported a fixture investment as low as \$300, and one over \$15,000. The range was as follows: 13 stores had fixtures valued at from \$300 to \$2500; 6 stores from \$2591 to \$5000; 7 stores, \$5001 to \$10,000; 2 stores from \$10,001 to \$15,000; and one over \$15,000. The fixture investment for both professional and commercial type pharmacies varies greatly. Some conservative proprietors open with a modest investment in fixtures and make improvements as the business warrants them.

In an eastern city there are three professional pharmacies under one management. One of these stores has a fixture and equipment investment of \$5510, made up of the following items: Wooden fixtures (wall cases, show cases, etc.), \$3500; soda fountain and carbonator, \$1600; biological refrigerator, \$221; and miscellaneous, \$75. The fixture cost in this store was high, due to the peculiar shape which made it necessary to make the wooden fixtures to order. The fixtures in the newest of the three stores, a beautiful modern store, amounted to only \$3800, this store not having a soda fountain. The third store had a fixture investment of \$5800.

A modest eight-foot mahogany veneer prescription display case used to divide the store front and rear was purchased by one of the "questionnaire" stores for \$300 at the factory. This sum did not include cases and other fixtures. The proprietor of this quite presentable little professional pharmacy was of the opinion that one could open a professional pharmacy with a fixture investment of as low as \$1000.

Equipment Necessary for the Prescription Department.—It would require about \$150 to purchase the equipment necessary to stock a prescription department. About half of this sum is taken up by the scales. The laws in different states and cities set up certain minimum requirements for scales sensitivity. Therefore, this is a subject which is not entirely optional with the pharmacist. It would seem, however, that professional pride alone would prompt him to use a scale of unquestioned accuracy. Certain items in the list will seldom be used by the pharmacist, and by some will be deemed of insufficient importance to warrant their purchase. These items are indicated by a footnote. It will be noted that there is no reference in the following list of equipment to the cost of labels, a necessary prescription department expense. This is a matter which will have to be decided by the individual pharmacist. However, it has been observed that pharmacists generally are inclined to spend too much on this item. It is believed that it would be a good policy to purchase in the beginning a very small assortment of labels, allowing future business to dictate the extent of further purchases. No typewriter is included in the list, nor is other office equipment. Many pharmacists purchase a second-hand typewriter at the start, which they use until business warrants the purchase of a new one. The list of necessary equipment for the prescription department follows:

Prescription scales, sensitive to $\frac{1}{20}$ gr. or 3 mg. (medium price, but good).....	\$63.00
Dispensing scales (for larger quantities).....	22.50
A set of apothecaries' weights ($\frac{1}{2}$ gr. to 1 oz.).....	2.15
A set of metric weights (10 mg. to 50 Gm.).....	2.31
A set of at least 5 graduates (60 minim, 4 ounce, 8 ounce, 1 pint and 1 quart).....	3.29
A set of at least 2 graduates (125 cc. and 250 cc.).....	1.25
Wedgwood mortars and pestles [one No. 2 (16 oz.) at \$1.32, and one No. 10 (10 pints) at \$6.36].....	7.68
Glass mortars and pestles, assorted (2 oz. size for \$0.34, 4 oz. at \$0.40, 8 oz. for \$0.55 and	

16 oz. for \$0.50; 6 inch for \$0.68 and 8 inch for \$0.84).....	2.14
Steel spatulas, assorted (3 inch for \$0.38, 5 inch for \$0.50, 6 inch for \$0.68 and 8 inch for \$0.84).....	2.40
1 rubber or composition spatula (6 inch for \$0.50).....	0.50
Bunsen burner (estimated cost).....	1.00
A pill tile (porcelain, 10 by 12 inches).....	1.80
A pill roller ¹	0.38
A pill finisher (estimated cost) ¹	1.00
A water-bath (estimated cost) ¹	1.00
A set of funnels (2 oz. for \$0.14, 4 oz. for \$0.16 and 8 oz. for \$0.22).....	0.52
A ring stand or funnel support (estimated cost).....	1.00
A percolator (glass— $\frac{1}{2}$ gallon) ¹	1.20
Three stirring rods (6 inch for \$0.02, 8 inch for \$0.03, 10 inch for \$0.04).....	0.09
Filter paper (three packages of different sizes).....	2.20
Three flasks (100 cc. to 500 cc.).....	0.64
Two evaporating dishes (diameter, 4 inch for \$0.38 and 8 inch for \$0.67).....	1.05
All standard sizes of empty capsules (1 box 100 in each of 8 sizes).....	1.59
Three boxes of powder papers (two plain and one waxed).....	1.41
All standard sizes ($\frac{1}{2}$ oz. to 16 oz.) of prescription bottles with good grade corks or other closures (390 bottles in 8 sizes).....	9.24
All standard ointment jars (three of each of five sizes ranging from $\frac{1}{2}$ oz. to 4 oz.).....	0.64
One dozen ointment tubes, small sizes, assorted tips.....	0.65
One moderately fine sieve ¹	0.75
Two prescription files to hold 500 to 1000 prescriptions.....	2.50
A poison register.....	1.25
An exempt narcotic record (estimated cost).....	1.00
Pill boxes (9 doz. assorted pasteboard; and green glass capsule vials (4 doz.)).....	3.02
One gross assorted powder boxes (4 sizes).....	2.45
Six dozen folding cartons (sizes 1 oz. to 16 oz.).....	0.67
Nine dozen capsule slides (3 sizes assorted).....	0.70
Total equipment investment.....	\$144.97

¹ These items would by some be considered unnecessary.

No biological refrigerator has been included in the list of equipment, due to the diversity of opinion on this subject. Some stores opening with a small prescription business purchase a small refrigerator for as little as \$10 or \$25. Others reserve a section of their fountain refrigerator for the storage of biologicals.

The United States Pharmacopœia X specifies that diphtheria and tetanus antitoxins shall be preserved at a temperature between 4.5° and 20° C. (40° and 68° F.), preferably the lower limit, and that smallpox virus be kept at the lowest possible temperature, preferably below 0° C. (32° F.), and never above 5° C. (41° F.). The same storage conditions should apply to all other biologicals. Some states have regulations covering this phase of biological merchandising. If the dealer has failed to provide proper storage and officials have condemned all or part of his stock of biologicals, the manufacturer cannot be expected to reimburse him for the loss. One manufacturer's catalog offers two all steel biological refrigerators, cork insulated, with respective capacities of 75 pounds and 150 pounds of ice, for \$43.50 and \$67.70, respectively, f.o.b. the factory.

The Pharmacist's Library.—In some states, drug stores are required to possess the current editions of the United States Pharmacopœia and the National Formulary. However, it would seem that the pharmacist would have sufficient pride in his profession to maintain some semblance of a professional library, even if not required by law. Most of the survey stores had a fair assortment of reference books and when approached on the subject, expressed interest in a list of books which might form a standard pharmacist's library. It is believed that the accompanying list of reference books, a composite list drawn from all of the survey stores, should fill the library requirements of the average drug store, even if falling considerably short of some of the excellent libraries possessed by some of the nation's leading professional pharmacists. The pharmacist

should not labor under the delusion that his library is an extravagance. He should consider it a necessary investment, just as necessary as his scales or other prescription equipment. The library will pay dividends, in one way as a safeguard against the possibility of error.

The accompanying list is only supposed to cover the essentials. Those interested will experience no difficulty in adding to the list such books as "Practical Uranalysis and Urinary Diagnosis," Ruddiman's "Incompatibilities in Prescriptions," a book on pharmaceutical Latin, pharmaceutical arithmetic, a manual on toxicology and a local medical directory. It is not necessary to say that the pharmacist should have copies of regulations pertaining to narcotics and intoxicating liquors, and the sanitary code of his particular city. The total cost of the books listed below would be approximately \$75, considering the purchase of only one out of each set of bracketed books, of which the pharmacist should choose one.

Pharmacopœia of the United States ¹	\$4.00
The National Formulary ²	3.50
New and Non-Official Remedies ³	1.50
Pharmaceutical Recipe Book ²	5.00
Useful Drugs ³	0.60
Merck's Index ⁴	2.50
The United States Dispensatory ¹	15.00
{ Remington's Practice of Pharmacy ¹ or.....	10.00
{ Arny's Practice of Pharmacy ⁵ or.....	8.00
{ Caspari's Practice of Pharmacy ⁶	7.50
Pharmaceutical Syllabus ²	2.25
U. S. P.-N. F. Prescription Ingredient Survey ²	2.00
Basic Material for a Pharmaceutical Curriculum ⁷	4.00
4000 Years of Pharmacy ¹	5.00
The Art of Compounding ⁸	4.00
{ Treatise on Commercial Pharmacy ¹ or.....	4.50
{ Drug Store Business Methods ⁶	2.75
The Cost of Medicines ⁹	2.50
{ Pharmaco-Therapeutics, Materia Medica and Drug Action ¹⁰ or.....	15.00
{ Pharmacology and Therapeutics ⁵	7.50

¹ Agent and publisher is the J. B. Lippincott Co., Philadelphia, Pa.

² Published by the AMERICAN PHARMACEUTICAL ASSOCIATION, Baltimore, Md.

³ Published by the American Medical Association, Chicago, Ill.

⁴ Published by Merck and Co., Inc., Rahway, N. J.

⁵ Published by W. B. Saunders Co., Philadelphia, Pa.

⁶ Published by Lea and Febiger, Philadelphia, Pa.

⁷ Published by McGraw-Hill Book Co., Inc., New York, N. Y.

⁸ Published by P. Blakiston's Son & Co., Inc., Philadelphia, Pa.

⁹ Published by the University of Chicago Press, Chicago, Ill. (A brief abstract of this report is available to interested persons upon request to the publishers.)

¹⁰ Published by D. Appleton and Co., New York, N. Y.

Necessary Financial Outlay in Opening a New Store.—In the last chapter of this report a list of leading chemicals, galenicals, botanicals, etc., based on the study of 20,000 prescriptions, is presented. If only those ingredients which occurred five times or more each in 10,000 prescriptions were purchased on the opening order, the cost would be \$605.77. This is believed to be a sufficient opening stock for the average commercial type drug store, and the basic stock for a professional pharmacy. In fact, it is believed that a conservative pharmacist would find the list of ingredients occurring at least ten times each a sufficient opening order for a commercial type pharmacy. These ingredients would have a total cost of only \$387. This information is presented in detail in Chapter VII.

The cost of fixtures and prescription department equipment has been presented above, and it has been seen that a presentable and not under-equipped drug store can be opened for a comparatively small sum, in fact, a much smaller sum than is often spent by pharmacists, who are

often inclined to make a large opening investment without waiting to see the amount warranted by the store's progress.

As based on experience, the 35 "questionnaire" professional pharmacists reported that it would require an average investment of \$7264 to open a professional pharmacy. The typical opinion was that an investment of \$5000 would be sufficient.

ASSOCIATION MEMBERSHIP.

Membership in professional and trade associations, both national and local, should be indulged in by the pharmacist. Furthermore, he should strive to attend their meetings, for the amount of benefit he derives will correspond to his own participation and contribution. The sum of \$25 a year is not too large for this purpose and should be regarded as a necessary and justifiable expenditure. Seven of the commercial type test store proprietors spent an average of \$54 a year for association dues, one proprietor spending as high as \$160.

WINDOW DISPLAYS AND OBSERVANCE OF "PHARMACY WEEK."

Three of the four professional pharmacies providing the principal test laboratories for this study are located on the ground floor and have show windows. The field force, however, failed to observe more than a minimum attempt to take full advantage of these windows by frequent changes of the display contained therein. The tendency was to place a few ornamental jars containing brightly colored chemicals in the windows and to leave them there.

It was not ascertained to what extent the four St. Louis professional pharmacies studied observed "Pharmacy Week." However, 31 of the 35 questionnaire stores answered a question to this effect, 23 of the 31 stating that they did observe "Pharmacy Week." However, it is believed that pharmacists as a whole are not observing "Pharmacy Week" or installing sufficiently professional and educational window displays, and they are urged to give these subjects further consideration. A national association which for the past several years has published and given to retailers lithographed maps and "back drops" portraying colleges of pharmacy, world distribution of chemicals, botanicals, etc., has found that only 8000 to 10,000 of the approximately 60,000 retail druggists in the country use the material. If all druggists would cooperate, the association would continue the work. But so many druggists have refused to use the material or to join in the observance of "Pharmacy Week" that the members of the association have become somewhat discouraged in their effort to aid the retail pharmacist.

REQUIREMENTS OF THE PRESCRIPTION CONTAINER.

The question as to the advisability of using glass containers or pasteboard boxes for capsules, pills and tablets and various chemicals, is not one which lends itself to scientific analysis in this type of a survey. However, as this is a question of considerable interest to the profession, the opinions of several chemical and pharmaceutical manufacturers and others who have sought the answer to this question were obtained.

Proponents of the glass containers maintain that such containers are air-tight, and that pasteboard boxes are not; that capsules themselves are not air-tight and are subject to deterioration; and that a large number of chemicals are subject to chemical or physical change when coming into contact with moisture, which reaction can only be prevented by the use of air-tight glass containers. They further contend that inasmuch as the average druggist is not familiar with all the chemicals affected by moisture, the only safe course is to put up all chemicals, tablets, capsules, etc., in glass containers.

One impartial authority, who has made detailed scientific observations on this subject, says that these conclusions as to the superiority of air-tight glass containers over pasteboard boxes are correct, but adds that the cheapness of pasteboard boxes make their use desirable when stable chemicals such as quinine are dispensed. However, with deliquescent chemicals (which are set forth in the U. S. Pharmacopœia) such as potassium acetate, air-tight glass containers are indicated, according to this authority. He further says that chemicals affected by light and not by the action of air can well be dispensed in opaque pasteboard boxes.

One chemical manufacturer states that the general policy of his firm is to supply chemicals in the most economical package, consistent with the requirements for the protection of the particular chemical. Glassware being more expensive, items are only packaged in bottles when

necessary. This manufacturer made a test of more than 600 chemicals for light sensitivity, and submitted a list of 50 chemicals which according to these tests required light protection when supplied in glass containers. However, while the other items may be immune from the composition of light, when mixed together a chemical reaction might take place in the presence of light. Many other chemicals which are light sensitive were not included in the test inasmuch as they are furnished in cans and cartons. It is further suggested that possibly it would be better to package pills and capsules composed of light sensitive items in containers protected from light, which could be a box, a can or a bottle of colored glass, although the glass container has a better appearance and possibly is more convenient to use. This manufacturer formerly used amber glass, but is now using jet black containers, which have proved satisfactory.

The technicians of another manufacturer advise that a pasteboard box for capsules, pills and tablets appears to be more convenient for the consumer than a screw cap bottle; that unless the bottle has a wide mouth (is really a jar) it is often difficult to get a capsule out of the bottle, particularly if it sticks. They further state that the theoretical advantage of an air-tight glass bottle over a pasteboard box is greatly diminished in the usual practice, when the bottle is opened several times a day. This manufacturer also emphasizes the greater expense of the glass container.

Nine of the 35 questionnaire professional pharmacies used boxes for capsules, pills, etc., 8 used bottles for these items and the other 18 firms used both bottles and boxes. Seventeen firms favored corks, 16 favored screw caps and 2 used both types of closures for bottles. Only 5 of the 35 pharmacies had their name stamped on their bottles.

CHAPTER I. SALES, EXPENSE AND PRESCRIPTION BUSINESS IN THE PROFESSIONAL PHARMACY.

SALES, EARNINGS AND OPERATING FACTORS IN FOUR PROFESSIONAL PHARMACIES.

The sales volume, net profit and operating factors of four professional drug stores are presented in Table I. For Stores A and B, the results shown are for the year 1930 as well as for 1931, so that changes over a two-year period may be noted. It will be seen that the sales volume in Store A dropped appreciably in 1931 as compared with 1930, while Store B had an almost corresponding increase over the two-year period. Note the change in the operating expense and net profit ratios to sales in Stores A and B over the two years. These ratios seem to reflect careful management, for in spite of the large decrease in sales in one store and the increase in the other, the operating expense was trimmed or expanded so that it maintained an almost constant relationship to sales. The operating expense of these drug stores is broken down into more detail in Table II, where it is shown by types of expense.

It is interesting to note the uniformity between the stores as to the gross margin percentages. Only Store C was out of line, its gross margin amounting to only 37.8 per cent of sales, which thus left a much smaller reservoir out of which to pay operating expenses and take a net profit. Nevertheless, Store C made a good margin of net profit, due to its low cost of operation. In case the average gross margin for these professional pharmacies, amounting to 45.7 per cent of sales, seems a little low for exclusive prescription pharmacies, it should be remembered that this is the gross margin for the entire business of these stores, and not just the prescription business alone. In Store A, for example, the nonprescription business amounted to over 40 per cent of the total sales volume, as will be seen in Table IV. Although gross margin is an important factor in profit production, this table certainly shows that it is not the only important factor.

The case of Store D certainly shows clearly the importance of watching the store's operating expense to keep it trimmed down to a reasonable figure. Store D had the highest gross margin of any of these professional drug stores and yet it produced the smallest margin of net profit, only 2.8 per cent of sales. Its turnover was about average, so the high operating expense was not due to that factor. Reference to Table II will disclose the types of expense which were unusually high in Store D, running the operating expense up to the point where it consumed 46.4 cents on every dollar of sales. The pharmacist should always keep in mind the fact that every additional dollar of operating expense means that there will be a dollar less of net profit.

The turnover figures shown represent the financial turnover, that is, the number of times that the money invested in the average inventory was turned during the year 1931. Although it is

generally conceded that a high turnover gives better profit possibilities and is a sign of efficient operation, it will be seen that high turnover is not an absolute essential in these professional pharmacies. Store C had the lowest turnover rate and at the same time the lowest operating expense in proportion to sales. However, Store C would undoubtedly benefit by simplification of its inventory and should get rid of many "dead" items by methods suggested in a later section of this report, devoted to inventory simplification. The sales volume of Store C was about the same as that of Store B, and yet Store C's turnover was 1.8 times less per year.

An agency in St. Louis made a study of the operations of 40 commercial type drug stores during 1931. These stores were for the most part located in residential communities, although a few were situated at traffic intersections in business subcenters. These stores had an average annual sales volume of \$32,180; their average gross profit amounted to 32.3 per cent of sales; average operating expense was 31.1 per cent of sales; average net profit, 1.2 per cent of sales; and their average stock turnover, 3.1 times a year. It is interesting to compare these operating results with those shown in the table for the four professional stores. The professional stores were certainly operated at greater net profit than these commercial type stores, having an average net profit of over \$10,000 each, as compared with an average net profit of only \$383 for the commercial type stores. The gross profit of the commercial type stores was considerably less than in the professional stores, but of course the commercial type stores did a much smaller proportion of prescription business with its higher percentage of gross profit.

The questionnaire stores (referred to in the introduction) had a decrease in sales volume in 1931 as compared with 1930, in 20 out of the 32 stores about which this question was answered. The other 12 showed an increase in volume in 1931.

TABLE I.—SALES, EARNINGS AND OPERATING FACTORS IN PROFESSIONAL DRUG STORES.

Store.	Annual Sales Volume.	Turnover.	Per Cent of Total Sales Volume.		
			Gross Margin.	Operating Expense.	Net Profit.
A (1930).....	\$136,928	¹	46.2	34.6	11.6
A (1931).....	123,321	3.6	46.5	36.2	10.3
B (1930).....	92,863	¹	47.7	37.0	10.7
B (1931).....	107,425	4.4	47.9	34.1	13.8
C (1931).....	106,678	2.6	37.8	27.8	10.0
D (1931).....	78,142	3.2	49.2	46.4	2.8
Average....	\$107,560	3.3	45.7	35.5	10.2

¹ The turnover for 1930 was not obtained.

OPERATING EXPENSE BREAKDOWN IN PROFESSIONAL DRUG STORES.

The breakdown of operating expense into the various types of expense making up the total is shown in Table II. Operating expense is shown in this table as a percentage of the sales volume of the particular store concerned, in order that comparison may be made between the stores. The operating expense summary is given for four professional pharmacies for the year 1931, and in order that a two-year period can be noted, the expense summary for 1930 is also given in the case of Stores A and B. This latter comparison shows some interesting facts, in view of the fact that the sales volume of Store A decreased about \$13,600 in 1931 over 1930, while during the same period Store B showed an increase in sales amounting to about \$14,500. It is interesting to note which expenses maintain a constant ratio to sales and which increase or decrease in the face of increased or decreased sales volume. It should be mentioned that this expense summary was obtained from the operating statements of the stores concerned, and in some cases the grouping of expenses in one store did not exactly correspond with another. For example, while Stores A and B showed "laundry" as a separate item, Stores C and D grouped this cost under "general expenses."

It will be seen that Store C had by far the lowest operating expense ratio to sales. This was partly due to the fact that its salary cost was low, particularly "officers' salaries," but even if this cost was raised to the average, the total expense ratio of Store C would remain the lowest. This low operating cost enabled Store C to make a good net profit in spite of a gross margin considerably below the other stores.

Of course, the outstanding expense items are salaries, rent and delivery expense. The last column in the table shows the per cent of the total expense accounted for by each type of expense. It will be seen that 60.3 per cent of the cost of operating the professional pharmacies was accounted for by salaries, 13.9 per cent by rent and 11.8 per cent by delivery expense.

In Store A for 1931, officers' salaries showed a large increase and employees' salaries a corresponding decrease over the previous year. This is due to the fact that certain members of the staff who in 1930 were classified as employees were made officers of the firm in 1931, so that their salaries were placed under "officers' salaries" in the latter year. This was done to secure a lower rate on employees' compensation insurance.

In case the delivery expense in Stores C and D seems surprisingly low as compared with Stores A and B, it should be remembered that Stores A and B placed drivers' and delivery boys' wages under "delivery," rather than under "salaries," thus raising the delivery expense item considerably.

The advertising expense of Store D is many times greater than in the other stores. More money was spent on advertising in Store D than was spent for rent. Less than one-third of this advertising expense was due to the cost of prescription blanks. The store advertised in the newspapers and circularized doctors as a part of its advertising campaign. The total operating expense in Store D was considerably higher than that of any of the other stores, this high expense being caused principally because of the high salary and advertising costs. In view of the fact that the net profit in Store D amounted to only 2.8 per cent of sales, it would ordinarily seem that the advertising expense amounting to 6.4 per cent of sales was a sign of inefficient management. However, it might prove to be a reasonable expenditure if the proprietor of the store purposely sacrificed present earnings in order to build up a large volume in the future. If Store D had this purpose, the expenditure may be justified. Store D had the smallest volume of the four professional stores in spite of the fact that it has been in business for eight years, this being the fourth year in its present location. But such a large advertising expense would not be justified just for the present business it brings in.

Note that the delivery expense in Store A was not pared down in 1931, so in view of decreased sales volume its percentage of sales was considerably higher in 1931. In Store B the amount spent for delivery in 1930 seemed to be sufficient to provide delivery service for the increased sales of 1931, so the delivery expense percentage was lower in 1931.

It is interesting to compare the operating expense of these professional pharmacies with that of the 40 commercial type drug stores referred to earlier. The operating expense of these 40 stores averaged 31.1 per cent of sales. Owner's salary amounted to 7.7 per cent of sales; wages averaged 11.2 per cent of sales; rent averaged 5.1 per cent of sales; advertising 1.1 per cent of sales, and miscellaneous expense (including taxes, insurance, repairs, depreciation, and heat, light and power, etc.) averaged 6 per cent of sales. Delivery expense was not shown for the 40 commercial type drug stores, but in 10 other similar stores it was found to be a negligible expense, amounting to only one-tenth of 1 per cent of sales.

Thus, almost the entire difference in expense between the professional and commercial type pharmacies is accounted for by the heavy delivery expense of the professional pharmacies. Owner's salary, wages and advertising expense were slightly higher in the professional stores, and rent was slightly lower, while miscellaneous expense was considerably lower in the professional stores, when considered as a percentage of sales volume.

While the per cent of rent to sales was only slightly lower in the professional pharmacies, it should be kept in mind that these commercial type stores were located in residential communities and subcenters, thus having a lower percentage of rent. The professional stores, on the other hand, were located in the heart of the theater district uptown, where rents are considerably higher. Thus, it is more practical to compare the professional store rents with rents of commercial type stores located in the same section of the city, which had an average rent amounting to 6.6 per cent of sales volume.

Inasmuch as the professional pharmacy does not generally have to depend on transient trade, it would seem unnecessary for them to occupy premises in a location which has high-priced rentals. The four pharmacies studied in this report located in this expensive district due to the fact that many physicians have offices in this district, and not because of the transient trade which comes to a business center. As is shown later in this report, much of the business of the profes-

sional pharmacy is received by telephone, the prescriptions being delivered to the patient, so that these customers actually visit the store only on rare occasions. Professional pharmacies can locate on upper floors, not requiring the more expensive ground floor space, and at locations somewhat removed from the heart of the business district, and save a considerable amount on rent, and yet not lose much of their potential business. The professional pharmacy generally locates in a building devoted to doctors' offices, or at least nearby, but generally physicians do not cluster in a high-rental business district, as did these physicians in St. Louis.¹

The questionnaire stores (the 35 professional pharmacies referred to in the introduction) paid rent averaging 6.5 per cent of sales, the range being from 3 to 11 per cent of sales. It is interesting to note that the store paying the highest rent, \$1000 a month, was second lowest when rent is considered as a per cent of sales, its rent amounting to only 3.5 per cent of sales. Of the 35 stores, 24 have stores on the ground floor and 11 have stores upstairs. Sixteen of the 35 questionnaire stores are located in medical arts buildings.

TABLE II.—BREAKDOWN OF OPERATING EXPENSE IN PROFESSIONAL DRUG STORES.

Type of Expense.	Per Cent of Total Sales Volume.							Per Cent of Total Expense, All Stores.
	Store A (1930).	Store A (1931).	Store B (1930).	Store B (1931).	Store C (1931).	Store D (1931).	Average.	
Salaries.....	21.07	21.81	20.29	19.11	17.42	31.06	21.38	60.3
Officers.....	3.45	12.32	10.88	9.54	5.62	14.62	8.94	25.2
Employees ¹	17.62	9.49	9.41	9.57	11.80	16.44	12.44	35.1
Rent.....	3.29	3.65	7.75	6.70	4.91	4.10	4.93	13.9
Power, Heat, Light, etc.....	0.33	0.36	0.48	0.38	0.53	0.59	0.43	1.2
Delivery.....	5.62	6.20	5.16	4.55	0.82	1.40	4.18	11.8
Advertising.....	0.96	0.96	0.47	0.50	0.63	6.40	1.42	4.0
General ²	0.45	0.48	..	..	0.58	4.43	0.82	2.3
Prescription Blanks ³	0.51	0.48	0.47	0.50	0.05	1.97	0.60	1.7
Telephone and Telegraph.....	0.40	0.42	0.44	0.36	0.49	0.40	0.42	1.2
Insurance.....	0.61	0.49	0.34	0.33	0.80	0.31	0.50	1.4
Interest.....	..	..	..	..	0.10	..	0.02	0.0 ⁵
Depreciation.....	0.72	0.82	0.38	0.34	0.73	0.37	0.59	1.7
Laundry.....	0.15	0.20	0.25	0.29	..	..	0.16	0.4
Taxes and Licenses...	0.30	0.32	0.25	0.19	0.22	0.32	0.27	0.8
Postage.....	0.10	0.10	0.08	0.13	0.78	..	0.20	0.6
Amortization of Leasehold.....	..	..	0.54	0.47	..	..	0.15	0.4
General Expenses ⁴ ...	1.06	0.89	0.56	0.75	0.38	1.40	0.83	2.3
Total Operating Expense.....	34.61	36.22	36.99	34.10	27.81	46.35	35.48	100.0

¹ In Stores A and B this item does not include drivers' and delivery boys' wages, which are placed under "Delivery."

² Includes donations.

³ Stores C and D designated this item as "stationery and printing."

⁴ Includes such items as repairs, freight and express, and in Stores C and D laundry.

⁵ Less than $\frac{1}{100}$ of 1%.

PRESCRIPTION BUSINESS RECEIVED BY TELEPHONE.

Store A has three telephones at an average expense of \$14 each per month. About 15 per cent of this store's prescription business is received over the telephone from physicians. About 30 per cent of the total prescription business consists of refills telephoned in by customers and delivered to them. This store does not have private lines to the offices of physicians, and the

¹ Information of this type can be obtained by consulting the Store Location Studies conducted in connection with the National Drug Store Survey.

proprietor does not believe this expense would be justified. About the same situation is reported for Store B, which had three telephones including one coin telephone.

Store C has six telephones, two of which are coin telephones, and the total telephone bill amounts to about \$36 a month. From 15 to 20 per cent of the total prescription business comes by telephone, according to the proprietor's estimate. This store has private lines to the offices of two physicians, but the proprietor does not believe that the expense is justified.

Store D has two telephones which cost about \$14 each and one pay station which does not cause the store any expense. The prescription business received by telephone in this store is very important as it amounts to about 50 per cent of the total prescription business. This store has no private lines to physicians' offices. As to whether or not private telephones of this sort are justified, the proprietor makes reference to a pharmacy in Louisville which gave this scheme a year's trial and then abandoned it.

Four of the questionnaire stores had direct telephone lines to physicians' offices, and in three of these cases it was reported that the cost was warranted. Thirty, or 88.2 per cent of the 34 stores concerning which this question was answered, did not maintain such private telephone lines. As an average for 32 questionnaire stores, 26.6 per cent of their prescription business was received by telephone, and 29.9 per cent of the prescriptions filled were delivered.

TIME STUDY OF PRESCRIPTION BUSINESS IN THREE PROFESSIONAL PHARMACIES.

The following table is presented to give a picture of the flow of the prescription business in three professional pharmacies, according to various periods of the day from the time they opened until they closed in the evening. In Stores A and C the period from 3:00 to 6:00 P.M. had the largest number of prescriptions, but the two preceding periods, from 11:00 A.M. to 1:00 P.M. and from 1:00 to 3:00 P.M. really had the heaviest volume inasmuch as each of these periods is only two hours in length as compared with the three hours between 3:00 and 6:00 P.M. In Store D the two periods running from 11:00 A.M. to 3:00 P.M. were clearly outstanding.

In Stores A and C, the opening period from 8:00 to 11:00 A.M. and the closing period from 6:00 to 9:00 or 10:00 P.M., both being at least three-hour periods, clearly had the highest volume of prescription business. In Store D, the closing period, from 6:00 to 10:00 P.M. had the lightest volume, but the opening period in the morning had quite heavy volume. Thus it can be said that the professional pharmacy, generally speaking, will have its heaviest volume of prescription business from 11:00 A.M. to 3:00 P.M., and its lightest volume in the evening after 6 o'clock and during its opening period in the morning. Of course, in individual cases, such factors as store location may vary the time of day in which business is heaviest, but as professional pharmacies generally have a central location, most of them will probably encounter the same conditions as are shown in the table.

It will be seen that the delivery service is an important factor in the professional pharmacy. From 26 per cent (in Store C) to 43.6 per cent (in Store D) of the prescriptions were delivered. This, of course, represents an element of expense which must be taken into account when considering the profit possibilities of the professional pharmacy.

In Stores C and D, the Sunday hours were only half as long as the other days of the week, but the prescription business amounted to less than one-third of the usual daily volume. Store A was open from 9:00 A.M. to 4:00 P.M. However, practically the entire Sunday prescription work in this store is done within a three-hour period from 10:00 A.M. to 1:00 P.M. It will be seen that it is not so essential for the professional pharmacy to keep the long hours kept by the commercial type drug store, and that it is not the prescriptions which are responsible for the long business day of the commercial type pharmacy. Students of pharmacy who feel a repugnance to the long 14-, 16- and 18-hour days of the commercial type pharmacy will be drawn to the professional pharmacy, where the hours are generally shorter, and in many cases could be made even shorter, by closing after 6:00 P.M. and on Sundays when the volume of prescription business is so light that there is no necessity of remaining open. In many cases it would probably be more profitable to close the establishment than to keep it open in the evening and on Sunday, in view of the light volume of prescription business. It is not unreasonable to suppose that shorter hours in the drug business would attract a desirable type of young men.

The week considered for Store A was in April 1932, while a week in April 1933 was the time when this study took place in Stores C and D. The proprietor of Store D stated that business

in that store was at a low ebb during the week of this study and that the volume would normally be 20 per cent greater. The entire month of April 1932 was studied in Store A, but for the first week refills were not considered. When refills were considered the entire volume showed a considerable increase. The first period of the day, from 8:00 to 11:00 A.M., seemed to be the most affected by the inclusion of refills in the study, leading to the conclusion that the greater portion of this early morning business was occasioned by fairly regular customers bringing in prescriptions to be refilled while on their way to work.

As for the questionnaire stores, while there was a wide variation in the time at which these stores open and close, the majority opened at 8:00 A.M. and closed at 10:00 P.M. on week days, while the average Sunday hours are from 9:00 A.M. to 9:00 P.M. Two of the stores do not open on Sunday. As for the Sunday prescription business, 1 store reported that it is heavy, 3 that it is good, 5 that it is only fair and 24 that it is poor.

TABLE III.—PRESCRIPTION BUSINESS IN THREE PROFESSIONAL PHARMACIES ACCORDING TO THE TIME OF DAY IN WHICH THEY WERE FILLED.

Day.	Number of Prescriptions Including Refills and Percentages by Time of Day.										Number of Deliveries.		
	8 to 11 A.M. Num-ber.	Per Cent.	11 A.M. to 1 P.M. Num-ber.	Per Cent.	1 to 3 P.M. Num-ber.	Per Cent.	3 to 6 P.M. Num-ber.	Per Cent.	6 to 9 P.M. ¹ Num-ber.	Per Cent.		Total Day. Num-ber.	Per Cent.
<i>Store A.</i>													
Monday.....	28	13.9	46	22.9	47	23.4	62	30.8	18	9.0	201	100.0	51
Tuesday.....	41	20.0	43	21.0	46	22.4	57	27.8	18	8.8	205	100.0	62
Wednesday...	31	19.1	36	22.2	37	22.8	40	24.8	18	11.1	162	100.0	62
Thursday.....	20	11.0	39	21.6	41	22.7	61	33.7	20	11.0	181	100.0	53
Friday.....	36	19.4	36	19.4	35	18.8	60	32.3	19	10.1	186	100.0	50
Saturday.....	19	8.8	47	21.9	78	36.3	46	21.4	25	11.6	215	100.0	60
Sunday ²	50	100.0	..	..	..	..	..	..	..	..	50	100.0	16
Average daily ³	29	15.1	41	21.4	48	25.0	54	28.1	20	10.4	192	100.0	56
<i>Store C.</i>													
Monday.....	41	19.6	39	18.7	47	22.5	51	24.4	31	14.8	209	100.0	62
Tuesday.....	24	14.5	41	24.7	33	19.9	45	27.1	23	13.8	166	100.0	45
Wednesday...	32	17.6	38	20.9	37	20.3	43	23.6	32	17.6	182	100.0	43
Thursday.....	29	16.3	42	23.6	39	21.9	38	21.3	30	16.9	178	100.0	47
Friday.....	30	15.1	40	20.1	45	22.6	49	24.6	35	17.6	199	100.0	43
Saturday.....	33	15.0	37	16.8	51	23.1	56	25.5	43	19.6	220	100.0	59
Sunday ⁴	53	100.0	..	..	..	..	..	..	..	..	53	100.0	23
Average daily ³	32	16.7	39	20.3	42	21.9	47	24.5	32	16.6	192	100.0	50
<i>Store D.</i>													
Monday.....	26	20.5	25	19.7	25	19.7	25	19.7	26	20.4	127	100.0	65
Tuesday.....	22	19.0	37	31.9	28	24.1	20	17.2	9	7.8	116	100.0	43
Wednesday...	24	21.6	27	24.3	30	27.0	20	18.0	10	9.1	111	100.0	46
Thursday.....	25	24.0	34	32.7	35 ⁵	33.7 ⁵	5	6	10	9.6	104	100.0	43
Friday.....	32	32.7	21	21.4	20	20.4	15	15.3	10	10.2	98	100.0	44
Saturday.....	29	27.4	28	26.4	33	31.1	10	9.4	6	5.7	106	100.0	47
Sunday ⁴	33	100.0	..	..	..	..	..	..	..	..	33	100.0	..
Average daily ³	26	23.6	29	25.5	28	26.4	15	13.6	12	10.9	110	100.0	48

¹ This period is from 6:00 to 10:00 P.M. in Stores C and D.

² Total day, open from 9:00 A.M. to 4:00 P.M. only.

³ Sunday not included.

⁴ Total day, open from 9:00 A.M. to 4:00 P.M. only.

⁵ Prescriptions filled from 1:00 to 3:00 P.M. and from 3:00 to 6:00 P.M. are grouped together.

SHARE OF THE PRESCRIPTION DEPARTMENT IN SALES VOLUME.

As an average for the four professional stores, purely prescription business represented 73.13 per cent of total sales volume, as will be seen in Table IV. In the 13 commercial type drug stores,

as reported in the first prescription department report, the prescription sales volume averaged only 16.39 per cent of total store sales volume.

Stores A and B did not keep a record of their refill prescriptions at the time when the prescriptions studied were filled. However, they have since recognized the importance of such records for efficient operation of the department and kept a daily record of refills for several months. On the basis of these records there are estimated to be about 50 per cent as many refills as new nonnarcotic prescriptions in Stores A and B. In the case of Store D, refills were estimated to represent one-third of the total number of prescriptions filled and narcotics were estimated to amount to 7½ per cent of all prescriptions filled. However, in Store C the figures given for all types of prescriptions are based on an actual count of the prescriptions.

To determine the dollar sales volume for each type of prescription the number of prescriptions filled was multiplied by the average price of prescriptions of that type. The average prices of the different types of prescriptions in each store were determined by the study of a large number of sample prescriptions. Thus, while the percentages of sales volume accounted for by the different types of prescriptions as shown in Table IV are estimated figures, the method used in estimating them is believed to be of sufficient accuracy that there is no important variation from the actual figure, which it was impractical to obtain.

While the sales volume from liquor prescriptions amounts to a considerable proportion of the total sales of these stores, it should be remembered that the high average price per liquor prescription enables a relatively small number of prescriptions to bring in a large volume of sales. For example, in Store D regular prescriptions brought in 52.17 per cent and liquor prescriptions 27.27 per cent of the total sales volume. Yet Store D filled only 7103 liquor prescriptions as compared with 40,886 regular prescriptions.

Store A had the largest proportion of sales volume coming in from other than prescriptions. The proprietor of this store estimates that about one-third of this nonprescription business is in packaged medicines and goods and the other two-thirds in hospital supplies. None of these four stores had a soda fountain or carried tobacco or candy, and only a skeleton line of toiletries. Therefore, the 26.87 per cent of the business not accounted for by prescriptions mostly represents hospital and surgical goods, physicians' supplies, infant and invalid foods, biologicals, proprietaries and other items related to public health.

In the questionnaire stores (referred to in the introduction) on the average, 63 per cent of the total business was in prescriptions and the other 37 per cent nonprescription business. The typical proportion of the business accounted for by prescriptions, however, was 70 per cent. Only 25 of the 35 questionnaire stores answered this question. Nineteen of these stores sold patent medicines, while 16 did not. Seventeen operated soda fountains and sold candy, tobacco and toilet preparations, while 18 did not carry these nonprescription lines.

TABLE IV.—SHARE OF PRESCRIPTION DEPARTMENT AND CERTAIN TYPES OF PRESCRIPTIONS IN TOTAL SALES VOLUME OF PROFESSIONAL STORES.

Store.	Total Store Annual Volume.	Per Cent of Total Store Sales Volume.					
		All Prescriptions.	Liquor Prescriptions.	Regular Prescriptions.	Regular Prescriptions Consisted of—	Nonnarcotics.	
					Narcotics.	New.	Refills.
A.....	\$135,398 ¹	59.06	9.70	49.36	4.54	29.88	14.94
B.....	99,415 ¹	71.76	17.22	54.54	4.20	33.56	16.78
C.....	106,678	87.66	19.50	68.16	7.75	40.70	19.71
D.....	78,142	79.44	27.27	52.17	3.77	30.96	17.44
Ave.	\$104,908	73.13	17.24	55.89	5.13	33.71	17.05

¹ The 12-month period considered for Stores A and B was from May 1, 1930 to May 1, 1931. (In the other two stores the calendar year 1931 was the period studied.)

NUMBER OF PRESCRIPTIONS FILLED DAILY AND ANNUALLY, BY TYPE OF PRESCRIPTION.

The four professional pharmacies filled from 112 to 219.4 prescriptions, exclusive of liquor, each day. Comparatively few liquor prescriptions were filled by these stores, ranging from only 12 to 19.5 each per day. As Store A had eight registered graduates, each employed full time, and

no part-time employees, it will be seen that each would have to fill an average of 28 prescriptions per day, exclusive of liquor prescriptions. Store B had six full time employees, and they would also average 28 prescriptions each per day. However, in each of these stores, one clerk handles all manufacturing of galenicals and other preparations, which consumes about half of his time, so that much clerical time would not be available for filling prescriptions. The proprietors of Stores A and B state that all of their clerks are necessary and are kept busy.

The questionnaire professional stores filled an average of 73 prescriptions each per day. Only 5 of the 33 proprietors answering this question stated that their stores filled more than 100 prescriptions daily, these 5 stores filling from 100 to 250 prescriptions each a day. These stores employ an average of 2.8 registered pharmacists and 5.5 nonregistered employees, an average of 8.3 employees per store. Nineteen stores have not reduced personnel during the depression, while 13 stores have reduced personnel.

The 13 commercial type drug stores studied and reported on in the first publication on the prescription phase of this study, filled an average of 15.3 regular prescriptions daily (1.7 narcotics, 9.7 new nonnarcotics and 3.9 refills) and 2.3 liquor prescriptions per day each. It is interesting to compare this showing for commercial type drug stores with the large daily volume of prescription business in the four professional pharmacies.

TABLE V.—NUMBER OF PRESCRIPTIONS FILLED, BY TYPES, DURING A YEAR, AND DAILY AVERAGE OF EACH.

Type of Prescription.	Number of Prescriptions Filled.							
	Store A.		Store B.		Store C.		Store D.	
	Yearly Total.	Daily Average.	Yearly Total.	Daily Average.	Yearly Total.	Daily Average.	Yearly Total.	Daily Average.
Narcotics.....	7,576	20.8	4,448	12.2	8,348	22.9	3,066 ²	8.4 ²
New Nonnarcotics.	48,334	132.4	37,660	103.2	47,779	130.9	24,191	66.3
Refills.....	24,167 ¹	66.2 ¹	18,830 ¹	51.6 ¹	23,623	64.7	13,629 ²	37.3 ²
Total Regular Prescriptions..	80,077	219.4	60,938	167.0	79,750	218.5	40,886	112.0
Liquor.....	4,378	12.0	5,705	15.6	6,933	19.0	7,103	19.5
Total, All Prescriptions, Including Liquor	84,455	231.4	66,643	182.6	86,683	237.5	47,989	131.5

¹ Estimate, based on actual records kept since the field work on this survey.

² Proprietor's estimate.

NOTE: The year concerned for Stores A and B was from May 1, 1930 to May 1, 1931; for Stores C and D, the calendar year 1931 was studied.

PRESCRIPTION BUSINESS BY TYPE OF PRESCRIPTION IN 1910, 1920 AND 1930.

Table VI shows the breakdown of prescriptions, both narcotic and nonnarcotic, into official, mixed and specialty types in professional Stores A and B. A sample lot of prescriptions in each store serves as the basis of this analysis. In order to note any changes in the use of these different types of prescriptions over the past two decades, 1000 prescriptions filled by Store A in 1910, and another 1000 prescriptions filled by this store in 1920, were included in the study. The sample for 1930 consisted of 5170 prescriptions filled by Store A and 3500 filled by Store B.

It will be seen that there is little difference in the proportion of the total prescription business accounted for by each of the three types of prescriptions—official, mixed and specialty—between the two stores or within Store A in the three different periods. Despite the frequently asserted statement that specialty prescriptions have been supplanting official prescriptions, it will be seen that official prescriptions decreased only 2.2 percentage points from 1910 to 1930, while specialties also showed a decrease of 1.3 percentage points in the same period and mixed prescriptions show an increase of 3.5 percentage points. Approximately 25 per cent or slightly less than one out of four of the prescriptions included in this study for the twenty-year period called exclusively for specialties. This finding will come as a surprise to many members of the profession.

The decrease, although slight, was constant for both types of prescriptions, mixed prescriptions gaining the ground lost by the other two types. However, in Store B in 1930, official and

specialty prescriptions each represented a higher proportion of the total prescription business than they did in Store A for their high year, 1910. Therefore, it can be said that regardless of the store or the year, in the two stores studied official prescriptions represented a little more than half of the total prescription business when both narcotic and nonnarcotic prescriptions are considered, mixed and specialty prescriptions dividing the other half of the total about equally.

Of course, as might be expected, there were few narcotic specialty prescriptions, so official and mixed prescriptions had a resultant higher proportion of the total when narcotics alone are considered. It is not possible to show narcotics and nonnarcotics separately for 1910, as the Federal narcotic law was not in effect at that time and narcotics were not distinguished between or filed separately.

TABLE VI.—PRESCRIPTION BUSINESS BY TYPES OF PRESCRIPTIONS.¹

Prescriptions Studied.	Types of Prescriptions.							
	All Prescriptions.		Official.		Mixed.		Specialties.	
	Number.	Per Cent of Total.	Number.	Per Cent of Total.	Number.	Per Cent of Total.	Number.	Per Cent of Total.
Store A (1910).....	1000	100.0	531	53.1	233	23.3	236	23.6
Store A (1920):								
Narcotic.....	150	100.0	76	50.7	60	40.0	14	9.3
Nonnarcotic.....	850	100.0	444	52.2	189	22.3	217	25.5
Total.....	1000	100.0	520	52.0	249	24.9	231	23.1
Store A (1930):								
Narcotic.....	1078	100.0	778	72.2	259	24.0	41	3.8
Nonnarcotic.....	4092	100.0	1856	45.4	1127	27.5	1109	27.1
Total.....	5170	100.0	2634	50.9	1386	26.8	1150	22.3
Store B (1930):								
Narcotic.....	500	100.0	347	69.4	119	23.8	34	6.8
Nonnarcotic.....	3000	100.0	1527	50.9	627	20.9	846	28.2
Total.....	3500	100.0	1874	53.6	746	21.3	880	25.1

¹ Private formula prescriptions not considered in this table.

PRESCRIPTION BUSINESS BY FORM OF PRESCRIPTION.

It is interesting to see the proportion of the prescription business represented by different forms of prescriptions. Table VII shows that over half of the prescriptions studied for 1930 were liquids. However, liquids were not quite as important in 1930 when they represented 52.65 per cent of the prescriptions studied, as they were in 1920 and 1910 when they accounted for about 64 per cent of the prescriptions studied. This loss by liquids was taken up by a gain in use for capsules and tablets over the 20-year period. Tablets showed a steady increase, representing only 5.9 per cent of the prescriptions filled in 1910, but 9 per cent in 1920 and 13.5 per cent in 1930. Capsules did not show a gain in use from 1910 to 1920, but showed a considerable increase in 1930. The percentage for liquids showed a much greater drop for nonnarcotics than narcotics, although the latter was considerable.

Although not as important, it might be noted that bulk powder showed a steady increase, its percentage of the total being twice as great in 1930 as in 1910. Other than liquids, the two forms showing the greatest decrease in use were divided powders and pills. Most of the decrease for divided powders occurred between 1910 and 1920.

For comparison with this showing for prescriptions filled in professional drug stores it is noted that in the case of 23,963 prescriptions filled by 13 commercial type drug stores in 1930, published in the first report on the prescription phase of the National Drug Store Survey, liquids represented 61.3 per cent of the prescriptions studied, capsules 17.5 per cent, tablets 9.9 per cent and ointment only 3.8 per cent. It will be seen that tablets and ointment had a less important part in the commercial type drug stores than in the professional stores, while the reverse was true for liquids.

Colleges of pharmacy might make good use of the findings shown in this table in allocating work to students. The increased use of tablet prescriptions can probably be accounted for by

specialty prescriptions. The increased popularity of glandular products would partially, but not entirely, account for the increase in the use of capsules. A number of manufacturers are featuring products packed in capsules and encouraging physicians to write for these under names that will designate them as the product of an individual manufacturer, and this is undoubtedly responsible in large part for the increased use of capsules. (See later sections of this report entitled "Specialty Capsule Prescriptions" and "Introduction of New Manufacturers' Specialties" which give information concerning the form of recent remedies placed on the market.)

TABLE VII.—PRESCRIPTION BUSINESS BY FORM OF PRESCRIPTION IN 1930, 1920 AND 1910.

Form of Prescriptions.	Stores A and B (1930). ¹					
	Narcotic.		Nonnarcotic.		All Prescriptions.	
	Number of Prescriptions.	Per Cent of Total.	Number of Prescriptions.	Per Cent of Total.	Number of Prescriptions.	Per Cent of Total.
Liquid.....	949	60.14	3616	50.99	4565	52.65
Capsules.....	337	21.36	1258	17.74	1595	18.40
Tablets.....	223	14.13	951	13.41	1174	13.54
Ointment.....	27	1.71	704	9.93	731	8.43
Bulk Powder.....	..	...	198	2.79	198	2.28
Divided Powders.....	13	0.82	126	1.78	139	1.60
Pills.....	4	0.25	95	1.34	99	1.14
Effervescent Salts.....	..	...	55	0.77	55	0.64
Suppositories.....	19	1.21	25	0.35	44	0.51
Ampuls.....	1	0.06	17	0.24	18	0.21
Lozenges.....	..	...	20	0.28	20	0.23
All Other.....	5	0.32	27	0.38	32 ²	0.37
Total.....	1578	100.00	7092	100.00	8670	100.00

Form of Prescriptions.	Store A (1920).				Store A (1910).			
	Narcotic.		Nonnarcotic.		All Prescriptions.		All Prescriptions.	
	Number of Prescriptions.	Per Cent of Total.	Number of Prescriptions.	Per Cent of Total.	Number of Prescriptions.	Per Cent of Total.	Number of Prescriptions.	Per Cent of Total.
Liquid.....	103	68.67	545	64.12	648	64.80	637	63.70
Capsules.....	19	12.67	99	11.65	118	11.80	120	12.00
Tablets.....	20	13.33	70	8.23	90	9.00	59	5.90
Ointment.....	2	1.33	75	8.82	77	7.70	85	8.50
Bulk Powder.....	..	...	16	1.88	16	1.60	11	1.10
Divided Powders...	3	2.00	16	1.88	19	1.90	42	4.20
Pills.....	..	...	20	2.35	20	2.00	26	2.60
Effervescent Salts....	..	...	4	0.47	4	0.40	7	0.70
Suppositories.....	3	2.00	..	...	3	0.30	6	0.60
Ampuls.....	..	...	2	0.24	2	0.20	..	...
All Other.....	..	...	3	0.36	3 ³	0.30	7 ⁴	0.70
Total.....	150	100.00	850	100.00	1000	100.00	1000	100.00

¹ Does not include the 304 private formula prescriptions.

² Includes the following prescription forms: Narcotics, *units* five times; nonnarcotics, *granules* 11 times, *pearls* 7 times, *seed* 4 times, *pessaries* twice and *soap*, *cubes* and *plaster* each one time.

³ Includes: *Granules* twice and *tamppons* once, all nonnarcotic.

⁴ Includes: *Plasters* twice, *paste* twice and *granules*, *tamppons* and *konsel* each once.

CHAPTER II. SEASONAL DEMAND FOR PRESCRIPTIONS.

Most manufacturers find that the slow or dull season for pharmaceuticals is during the summer months, due to the fact that there is less sickness in this season, this business generally increasing with the advent of fall. Table VIII shows this seasonal trend clearly, the volume in

both stores taking a considerable drop in the summer months, while the heaviest business was in the winter. While the usual commercial type drug store maintains its volume in the summer due to increased volume at the fountain and some other departments, the professional pharmacy does not have this diversification in types of products carried, so its total volume reflects the decreased volume in prescriptions and other lines connected with public health.

Health conditions of the country during the period covered by this survey were the best known for some time. As the pharmaceutical industry is governed more by public health conditions than by general business influences, the loss in volume during the current depression which has been less than that suffered by most industries, is more directly traceable to the good health conditions than to any other cause. The reputed general betterment of the public health must be taken into account when considering the future of prescription shops.

However, the proprietor of the professional pharmacy can profitably use any idle time which might accrue in the summer months, particularly August. Certain galenicals and other preparations can be manufactured for winter use. The spare time of the proprietor, or some other qualified person, can be utilized by "detailing" physicians and acquainting them with the store's services and products. This is also a good time to take inventory and to grant vacations to the members of the staff.

TABLE VIII.—TOTAL VOLUME OF SALES IN TWO PROFESSIONAL PHARMACIES, BY MONTHS.

Month.	Total Sales Volume.	
	Store A.	Store B.
1930.		
May.....	\$11,552	\$7772
June.....	11,374	7612
July.....	10,610	7561
August.....	9,729	6780
September.....	10,661	7048
October.....	11,222	8156
November.....	11,036	8112
December.....	11,856	8205
1931.		
January.....	12,832	9477
February.....	11,432	9816
March.....	11,909	9307
April.....	11,185	9569
Total.....	\$135,398	\$99,415

SEASONAL DEMAND FOR REGULAR PRESCRIPTIONS.

The month by month volume of regular prescriptions (those other than liquor) is shown for four professional stores in Table IX. The calendar year 1931 is reported for Stores C and D and a twelve-month period starting May 1, 1930, is reported for Stores A and B. The fact that part of the months concerned are in 1930 for Stores A and B, and 1931 for the other two stores, makes no material difference. Thus, the total figure groups the prescription business by months, regardless of the year concerned.

The regular prescriptions tabulated in this table include both narcotics and nonnarcotics, and for Stores C and D, refills also. In all four professional stores, the months January through April had the heaviest volume, although May was also a heavy month in the case of Store A, and September through December also carried a heavy volume in Store C. The summer and late spring months were the lightest in all of these stores.

The last column of the table shows the proportion of the total number of regular prescriptions filled by the four professional stores falling into each month of the year. It will be seen that July, August and September were the three lightest months. These are the same months in which the total store sales volumes of Stores A and B were lightest, as shown in Table VIII.

For eight commercial type drug stores, reported on in the first publication on the prescription phase of the National Drug Store Survey, the three outstanding months as to number of regular prescriptions filled were February, January and March, respectively. Over 11 per cent of the

total number of regular prescriptions filled by these eight commercial type drug stores during the year studied were filled in February, 10.98 per cent in January, and 9.65 per cent in March. It is interesting to compare these commercial type store results with those for the four professional stores.

TABLE IX.—SEASONAL VOLUME OF REGULAR PRESCRIPTION BUSINESS IN FOUR PROFESSIONAL PHARMACIES.¹

Date. (1930)	Number of Prescriptions (Not Including Refills).		Date. (1931)	Number of Prescriptions (Refills Included).		Month.	Per Cent of Total in 4 Stores by Months, Regardless of the Year.
	Store A.	Store B.		Store C.	Store D.		
May	5066	3235					
June	4788	2966	January	6846	3960	January	9.56
July	4412	2908	February	6195	3838	February	8.75
August	3950	2676	March	7817	3894	March	9.59
September	4309	2855	April	7132	3706	April	8.91
October	4551	3314	May	6484	3548	May	8.38
November	4343	3203	June	6339	3392	June	8.00
December	4772	3552	July	5491	3237	July	7.34
(1931)			August	5327	2770	August	6.73
January	5323	4777	September	6578	3006	September	7.66
February	4792	4306	October	7675	3254	October	8.60
March	4975	4291	November	6700	3091	November	7.93
April	4629	4025	December	7166	3190	December	8.55
Total	55,910	42,108	Total	79,750	40,886	Total	100.00

¹ Includes both narcotic and nonnarcotic new prescriptions in all four stores, plus refills in Stores C and D.

SEASONAL DEMAND FOR NARCOTIC AND LIQUOR PRESCRIPTIONS.

The volume of narcotic prescriptions in three professional stores is shown by months in Table X. The greatest demand for narcotic prescriptions in these stores was in January and February, followed by the months of March, April and December. There was much less demand for narcotic prescriptions in the summer and late spring months than in the winter.

Taking Store A individually, it was found that January produced an outstanding volume of narcotic prescriptions, more than twice as many as in July and August. January was also the outstanding month for this type of prescription in the case of Store B, nearly three times as many narcotic prescriptions being filled in January as in some of the summer months. But in the case of Store C, although January had a large volume of narcotic prescriptions, the leading months were December and February, followed closely by April and November.

In the prescription department report dealing with commercial type stores, narcotic prescriptions were tabulated by months for eight stores. In these commercial type drug stores, the largest volume of narcotic prescriptions was in the months December through April, over 14 per cent of the narcotic prescriptions filled during the year being filled in February, and 13.5 per cent in January.

The greatest demand for liquor prescriptions in four professional pharmacies taken together was in December, 13.44 per cent of the total number of liquor prescriptions filled in a year being filled in this month. December was clearly the outstanding month for this type of prescription for Stores A, C and D. However, Store B reversed this showing, filling the smallest number of liquor prescriptions in December.

For eight commercial type drug stores, the first prescription department report showed that 13.47 per cent of the liquor prescriptions were filled in December, almost exactly the same proportion as for the professional stores. For the commercial type stores, May and November were the next most outstanding months in this regard, although the sales volume in those months was not as outstanding as in October and November for the professional pharmacies, which months had the largest volume in the professional stores, December excepted.

TABLE X.—SEASONAL VOLUME OF NARCOTIC AND LIQUOR PRESCRIPTION BUSINESS IN PROFESSIONAL PHARMACIES.

Month.	Narcotic Prescriptions of 3 Stores.		Liquor Prescriptions of 4 Stores.	
	Number of Prescriptions.	Per Cent of Total.	Number of Prescriptions.	Per Cent of Total.
January.....	2282	11.20	1718	7.12
February.....	2139	10.50	1653	6.86
March.....	1935	9.50	2022	8.39
April.....	2002	9.83	1882	7.80
May.....	1520	7.46	1901	7.88
June.....	1397	6.86	1689	7.00
July.....	1316	6.46	1747	7.24
August.....	1198	5.88	1729	7.17
September.....	1314	6.45	1869	7.75
October.....	1672	8.21	2344	9.72
November.....	1724	8.46	2323	9.63
December.....	1873	9.19	3242	13.44
Total.....	20,372	100.00	24,119	100.00

(To be continued next month)

TENTATIVE PROGRAM, CONFERENCE
OF PHARMACEUTICAL ASSOCIATION
SECRETARIES.

Officers: *President*, J. Lester Hayman, 325 Ash St., Morgantown, W. Va.; *First Vice-President*, Gustav Bachman, Minneapolis, Minn.; *Second Vice-President*, R. C. Wilson, Athens, Ga.; *Secretary-Treasurer*, Carl G. A. Harring, 20 Glen Road, Newton Center, Mass.; *Delegate to the House of Delegates*, Charles J. Clayton, Denver, Col. *Executive Committee:* Robert A. Lehman, Brooklyn, N. Y.; P. J. Garvin, New Haven, Conn.; J. W. Slocum, Indianola, Ia.; James J. Gill, Providence, R. I.

All sessions will be held in Hotel Loraine. First Session, Wednesday, August 30, 2:00 P.M., Colonial Room. Second Session, Friday, September 1, 2:00 P.M., Pompeian Room.

The Conference of Pharmaceutical Association Secretaries will try the plan of having no papers read but, instead, devote the sessions to round table discussions of timely topics. A list of topics follows, which may be added to.

1. Should the president be the directing head of the Association or should the Executive Committee be the governing body?

2. What form of program is most acceptable at conventions?

3. The resolutions that are submitted at annual meetings—who writes them? Should the secretary take an active part in preparing same?

4. Is it desirable to divide states into zones for the purpose of giving each zone representation in the presidency by rotation?

5. Should the functions of a secretary include that of contacting allied trades for the purpose of federation?

6. Is it possible to devise some plan whereby neighboring states may avoid holding conventions at the same time?

7. Contests and novel schemes for increasing interest in annual meetings.

8a. In what states are local and district meetings habitually held and what is the character of the programs at such meetings?

b. Are you following some concerted plan to link up these meetings with your State association for the purpose of increasing your membership?

9. What part do the drug trade salesmen play in the operation of State Pharmaceutical Associations and how can they function most satisfactorily—as associate members, or as independent affiliated organizations?

10. In what states are full-time secretaries employed? What are they paid? How are the necessary finances obtained? What do such full-time secretaries do to justify the compensation received? What states have abandoned full-secretary plan, and why?

11. What constructive thoughts have you received from these conferences, and what have you done to develop some of them for the benefit of your State association?