

pay for some desirable pieces. Recently I felt myself fortunate in the opportunity to purchase a copy of Dr. E. R. Squibb's personal diary for sixty dollars, a reasonable price. To make certain of such acquisitions now and when I will be gone I established The Wulling Trust Fund at the University of Minnesota. Out of the earnings of this fund periodic acquisitions are assured. I had hoped others would add to the fund or establish similar ones, but although there are many well-to-do pharmacists in Minnesota, no similar provision has been made. Possibly this Section or some of its members could interest those who can afford to do so, to create similar funds. Individuals or groups or associations might respond to solicitation. Pharmacists on the whole are prosperous and it is surprising that not more are altruistically inclined. It may be that the financially able ones have never thought of the splendid contributions they could make toward historical conservation through purchase, and invitations to that end might be fruitful. I firmly believe that an appeal to that end by this Section would strike some pharmacists sympathetically. While I do not make an outright recommendation to that effect, I think it would be quite within the scope of work of this Section to discuss the desirability of such an appeal in behalf of state museums and especially in behalf of the proposed museum in the coming Headquarters Building. Indeed, I think it would be consistent to suggest that every state make contributions of museum items of national importance to the A. PH. A. Headquarters' Museum as soon as it is established.

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#### PROFESSIONAL PHARMACY. IV.\*

BY C. B. JORDAN.

Complying with the request of the AMERICAN PHARMACEUTICAL ASSOCIATION, I am again reporting my results of the continuation of the study of Professional Pharmacies. My first three reports can be found as follows: Professional Pharmacy, *JOUR. A. PH. A.*, 18 (1929), 1170-1176; Professional Pharmacy II, *JOUR. A. PH. A.*, 19 (1930), 870-874; and Professional Pharmacy III, *JOUR. A. PH. A.*, 20 (1931), 930-938. Last year I secured through the assistance of friends a fairly complete list of professional drug stores of the United States. I am not at liberty to distribute this list because it was secured at considerable labor and expense. Frank Delgado, Drug and Chemical Assistant, Merchandising Research Division, Department of Commerce, Bureau of Foreign and Domestic Commerce, asked me if I would include a questionnaire for him when I circularized the professional pharmacies this year. I was glad to comply with this request, but when Mr. Delgado's questionnaire reached me I found that it consisted of 66 questions with a sufficient number of sub-divisions to make a total of 130 questions. I intended to add a number of questions but found Mr. Delgado's questionnaire so complete that it included practically all of the information I was seeking.

On April 18, 1932, I sent a copy of this questionnaire to every professional pharmacist, together with a letter urging their coöperation in giving the information desired. The questionnaire was so long that I seriously doubted that any number of pharmacists would attempt to complete it. I am happy to say that

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\* Second General Session, A. PH. A., Toronto meeting, 1932.

40 pharmacists, 11 to 12 per cent of the total number, returned the questionnaire. Of these one or two were received too late to be incorporated in this report and two or three were so incomplete that I could make little use of them. However, 35 pharmacists gave very satisfactory reports.

I have a copy of the questionnaire if any one wishes to see it. I do not believe it is necessary to duplicate it as part of this paper.

Professional pharmacists of the United States have coöperated with me in the studies I have made. In many cases they have freely given private information regarding their business knowing that the information submitted would be treated as confidential and that none of my reports would contain material that would permit identification of any store.

Although I have received excellent coöperation, I believe the professional pharmacists are tired, at least they should be, of filling out questionnaires for me and therefore I do not intend to continue these studies. My main object in making the studies was to arouse interest in professional pharmacy in the hopes that greater numbers of them would be put in operation. If I have accomplished that purpose I am more than satisfied. If the data submitted in the four studies have been of value to those interested in professional pharmacy or to others, I am more than repaid for the labor involved.

In completing this series of studies I wish to express my deep appreciation to professional pharmacists who have coöperated with me throughout the studies and to J. L. Weinland and Frank Delgado, who assisted in this last study.

J. L. Weinland, Extension worker of Purdue University School of Pharmacy, kindly consented to analyze these voluminous reports. Answers to 30 of the questions as arranged by Mr. Weinland were included in three tables. These tables gave a detailed picture of the variation between stores, but are too voluminous to print. All 65 questions are, therefore, discussed in this report.

In arranging the data we have found it convenient to report average, typical (median between high and low) and range for several different periods. The report is as follows:

1. *Age of Store:*

Average, 17 years; typical, 8 years; range: 12 from 0-5 years, 5 from 5-10 years, 4 from 10-20 years, 3 from 20-25 years and 8 from 25-68 years.

The significant result of this analysis is that 37.5% of all stores reporting have been opened within the last five years, 53.1% in the last ten years, and 65.6% in the last fifteen years. Two stores are 1 year old, one 2 years old, five 3 years old, two 4 years old and two 5 years old.

2. *Number of Prescriptions Filled the First Year in Business (per day):*

Average, 23.5; typical, 19; range: 9 from 2-10, 10 from 11-20, 3 from 21-30, 5 from 31-150.

Approximately 70% of all stores reporting filled 20 or less prescriptions per day the first year in business.

3. *Number of Prescriptions Filled Per Day in 1932:*

Average, 73; typical, 50; range: 4 from 10-20, 8 from 21-40, 9 from 41-60, 4 from 61-80, 3 from 81-100 and 5 from 101-250.

In 1932, only 12.1% filled less than 20 prescriptions per day, while 54.5% filled 50 or more per day.

4. *The Minimum Investment Required to Open a Professional Pharmacy* (as based on experience):  
Average, \$7264; typical, \$5000; high, \$40,000; low, \$1200; range: 3 from \$1200-\$2500, 17 from \$2501-\$5000, 6 from \$5001-\$10,000, 4 from \$10,001-\$15,000 and 1 over \$15,000.
5. *Number of Stores Having Branch Stores:*  
6 stores reported that they have branch stores,  
29 stores reported that they did not have branch stores.
6. *Frequency of Taking Inventory:*  
2 stores reported that they did not take inventory,  
1 store reported that it took inventory quarterly,  
1 store reported that it took inventory every six months,  
28 stores reported that they took inventory every year,  
2 stores reported that they took inventory every two years,  
1 store reported that it took inventory every three years.
7. *Minimum Stock Investment:*  
Average, \$9855; typical, \$7225; high, \$40,000; low, \$600; range: 8 from \$600-\$2500,  
5 from \$2501-\$5000, 8 from \$5001-\$10,000, 6 from \$10,001-\$15,000 and 5  
over \$15,000.
8. *Minimum Fixture Investment:*  
Average, \$5964; typical, \$3000; high, \$50,000; low, \$300; range: 13 from \$300-\$2500,  
6 from \$2501-\$5000, 7 from \$5001-\$10,000, 2 from \$10,001-\$15,000  
and 1 over \$15,000.
9. *Present Dollar Inventory of Stock:*  
Average, \$9255; typical, \$7000; high, \$35,000; low, \$1100; range: 3 from \$1100-\$1500,  
5 from \$1501-\$2000, 3 from \$4000-\$6000, 3 from \$6001-\$8000, 4 from  
\$8001-\$10,000, 8 from \$10,001-\$20,000 and 1 over \$20,000.
10. *Dollar Rental of Store and Percentage of Gross Sales:*  
The dollar rental of store per month: Average, \$261; typical \$225; high, \$1000;  
low, \$30; range: 7 from \$30-\$100, 8 from \$101-\$200, 6 from \$201-\$300,  
6 from \$301-\$400, 2 from \$401-\$500 and 2 over \$500.  
The percentage of gross sales: Average, 6.5%; typical, 6.25%; high, 11%; low, 3%;  
range: 4 from 3%-4%, 7 from 4%-5%, 2 from 5%-6%, 5 from 6%-7%,  
2 from 7%-8%, 1 from 8%-9%, 4 from 9%-10% and 1 over 10%.  
It is interesting to note that the store paying the highest rent, that of \$1000 per  
month, was second lowest in percentage, 3.5% of gross sales being paid for rent.  
On the other hand, the lowest rental, that of \$30 per month, represented the next  
highest percentage, 10% of gross sales being paid for rent. Of the seven  
stores paying less than \$100 per month rent, 3 ranged from 0.5% to 3.5%  
above the average percentage rental.
11. *Salary of Owner or Owners:*  
Twenty-five owners reported that they drew a salary, while 8 reported that they  
did not. The range was from \$25 to \$150 per week of those reporting. In-  
sufficient data does not allow a complete analysis.
12. *Number of Registered Pharmacist Employees:*  
Average, 2.8; high, 12; low, none; range: 4 employ none, 8 employ 1, 10 employ 2,  
4 employ 3, 3 employ 4, 1 employs 5 and 4 employ 6 to 12.
13. *Number of Non-Registered Men and Women Employed:*  
Average, 5.5; high, 54; low, none; range: 2 employ none, 8 employ 1, 6 employ 2,  
6 employ 3, 2 employ 4, 4 employ 5, 2 employ 6 to 10 and 4 employ 11 to 54.
14. *Total Number of Employees:*  
Average, 8.3; high, 65; low, 0; range: 1 employs none, 3 employ 1, 3 employ 2,  
6 employ 3, 3 employ 4, 5 employ 5, 8 employ 6 to 10, 2 employ 11 to 15 and  
3 employ 16 to 65.

15. *Salaries of Employees (registered and non-registered):*

Average, \$30.06 per week; typical, \$29.73 per week; divided as follows:

27 receive under \$15 per week	14 receive \$41-\$45 per week
10 receive \$16-\$20 per week	3 receive \$45-\$50 per week
11 receive \$21-\$25 per week	4 receive \$51-\$55 per week
19 receive \$26-\$30 per week	3 receive \$56-\$60 per week
20 receive \$31-\$35 per week	4 receive \$61-\$70 per week
12 receive \$36-\$40 per week	4 receive over \$70 per week

One owner reported that all clerks, registered as well as non-registered were employed on a commission basis.

16. *Reduction of Salaries:*

17 reported that salaries have been reduced,

14 reported that salaries have not been reduced.

17. *Reduction of Number of Employees:*

19 reported that the number of employees has not been reduced,

13 reported that the number of employees has been reduced.

18. *Proportion of Charge Sales to Total Sales:*

Average, 29.7%; typical, 30%; high, 70%; low, 2%; range: 8 from 2%-10%, 3 from 11%-20%, 7 from 21%-30%, 9 from 31%-40%, 3 from 41%-50% and 3 from 51%-70%.

19. *Comparison of 1930 and 1931 Volume of Business:*

12 reported that 1931 volume exceeded 1930,

20 reported that 1931 volume did not exceed 1930.

20. *Discount Allowed Physicians:*

3 reported that they gave no discount to physicians,

2 reported that they gave physicians the cost price,

6 reported that they gave cost + 10%,

4 reported that they gave cost + 15%,

1 reported that he gave cost + 20%,

3 reported that they gave retail - 10%,

1 reported that he gave retail - 12%,

6 reported that they gave retail - 15%,

5 reported that they gave retail - 20%,

3 reported that they gave retail - 25%.

21. *Training and Education of Proprietor:*

All stores reported that owner was a registered pharmacist.

22 or 62.8% reported that owners were college graduates,

13 or 37.2% reported that owners were not college graduates.

22. *Average Age of Proprietors when Business Was Opened:*

Average, 40 years; typical, 35 years; range: 12 were from 24-30 years, 10 from 31-40 years, 5 from 41-50 years and 4 from 51-56 years.

It is interesting to note that 38.7% of all proprietors opened their stores when over 24 and less than 30 years old, and that 71% opened their stores when they were under 40 years old.

23. *Number of Prescriptions a Registered Clerk Should Fill:*

1 reported that a clerk should fill 25 per day,

4 reported that a clerk should fill 30 per day,

2 reported that a clerk should fill 35 per day,

6 reported that a clerk should fill 40 per day,

13 reported that a clerk should fill 50 per day,

1 reported that a clerk should fill 60 per day,

1 reported that a clerk should fill 75 per day.

Twenty-one or approximately 66% estimated that a clerk should fill from 35 to 50 prescriptions per day.

24. *Estimated Minimum Population to Support a Professional Pharmacy:*

Average, 19,660 people; typical, 12,500 people.

Fifty per cent believed that more than 10,000 population is necessary, while 50% believed that 10,000 or less population would support a professional store. The estimates varied from 1500 to 60,000, and 27.2% estimated that 5000 or less were all that are necessary. One reported that the population was not important, but that it should be based on the number of prescribing physicians in the community.

25. *Sale of Patent Medicines and Sundries in Professional Stores:*

19 or 54.3% reported that they sell patent medicines,

16 or 45.7% reported that they do not sell patent medicines.

17 or 48.6% reported that they sell candy, cigars, soda and toilet preparations,

18 or 51.4% reported that they do not sell candy, cigars, soda and toilet preparations.

26. *Percentage of Total Sales That Is Non-Prescription:*

Average, 37%; typical, 30%; high, 75%; low, 2%.

Although only 25 of the 35 stores reported on this question, it may be estimated that about one-third of the business of professional stores is in non-prescription business.

27. *Location of Store:*

24 have stores on the ground floor,

11 have stores upstairs,

16 are located in a Medical Arts Building,

19 are not located in a Medical Arts Building.

28. *Size of Store:*

Average, 1632 sq. ft.; typical, 1075 sq. ft.; high, 10,320 sq. ft.; low, 308 sq. ft.; range: 7 from 300-500 sq. ft., 9 from 501-1000 sq. ft., 4 from 1001-1500 sq. ft., 8 from 1501-2000 sq. ft. and 4 from 2001-10,320 sq. ft.

29. *Delivery Equipment:*

21 used auto,

6 used motorcycle,

3 used bicycle,

2 used messenger,

2 used auto and bicycle,

1 used auto, bicycle and motorcycle.

30. *Number of Employees for Delivery Service:*

16 employ 1 delivery boy,

12 employ 2 delivery boys,

4 employ 3 delivery boys,

1 employs 4 delivery boys.

31. *Annual Delivery Expense:*

Average, \$2181; typical, \$800; high, \$15,000; low, \$55; range: 3 from \$55-\$250,

6 from \$251-\$500, 1 from \$501-\$750, 8 from \$751-\$1000, 2 from \$1001-\$1500,

2 from \$1501-\$2500 and 6 from \$2501-\$15,000.

32. *Proportion of Prescriptions Delivered:*

Average, 29.9%; typical, 25%; high, 60%; low, 2%; range: 4 from 2%-5%,

4 from 6%-10%, 6 from 11%-20%, 6 from 21%-30%, 9 from 31%-50%

and 4 at 60%.

33. *Direct Phone Service to Physicians:*

4 or 11.8% had direct phones to physicians,

30 or 88.2% did not have direct phones to physicians.

Of the 4 that maintained phone service to physicians, 3 reported that the cost was warranted.

34. *Percentage of Prescriptions Received over Phone:*  
Average, 26.6%; typical, 20%; high, 75%; low, 1%; range: 9 from 1%-10%,  
9 from 11%-20%, 4 from 21%-30%, 8 from 31%-50% and 2 from 51%-75%.
35. *Amount and Medium of Advertising:*  
26 reported that they advertise, 9 reported that they do not advertise.  
Of those advertising, the following mediums were used: 18 used the newspaper,  
11 used direct mail, 3 used local medical publications, 2 used the radio, 2 used  
blotters and booklets, 1 used church periodicals, 1 used the auto, 1 used the  
street car.
36. *Appearance before Medical Groups:*  
14 or 41.2% speak before medical groups,  
20 or 58.8% do not speak before medical groups.
37. *Need of National Organization of Professional Pharmacists:*  
21 or 72.4% think there is a need for organization,  
8 or 27.6% do not think there is a need for organization.
38. *Contact with Physicians:*  
22 or 62.8% detail physicians with U. S. P., N. F. and specialties.  
13 or 37.2% do not detail physicians with U. S. P., N. F. and specialties.  
29 or 85.3% make personal calls on physicians,  
5 or 14.7% do not make personal calls on physicians.
39. *Filing Manufacturer's Literature Regarding New Preparations:*  
All filed manufacturer's literature except 3. The general opinion was that this was  
productive of results and that the physicians used it to a large extent.
40. *Furnishing Physicians with Prescription Blanks:*  
Only two of the 35 druggists reporting did not furnish physicians with prescription  
blanks. The cost ranged from \$3.00 per year to \$750 per year, the typical  
cost being \$125 per year.
41. *Hours of Day That Store Is Opened and Closed:*  
Although there was a large variation in the time at which these stores are opened  
and closed, the majority opened at 8:00 A.M. and closed at 10:00 P.M. on week  
days, while 9:00 A.M. to 8:00 P.M. were the average Sunday hours. Two  
stores were never opened on Sunday, while 4 stores report that they never  
close any day of the week.
42. *Amount of Sunday Prescription Business:*  
1 reports Sunday prescription business heavy,  
3 report Sunday prescription business good,  
5 report Sunday prescription business fair,  
24 report Sunday prescription business poor.
43. *Dispensing Physicians:*  
30 or 85.7% reported that physicians in their city dispensed,  
5 or 14.5% reported that physicians in their city do not dispense.  
15 or 53.5% reported that dispensing is increasing,  
13 or 46.5% reported that dispensing is decreasing.
44. *Filling of Private Formulas:*  
21 or 60% do not fill many private formulas,  
14 or 40% do fill many private formulas.
45. *Private Formulas to Physicians:*  
18 or 54.5% prepare and submit formulas to physicians,  
15 or 45.5% do not prepare and submit private formulas to physicians.
46. *Number of Physicians Writing Bulk of Prescriptions:*  
Average, 44; typical, 15; range: 43.7% from 10 or less physicians; 41.6% from  
11 to 50 physicians; 14.7% from 51 to 267 physicians.

47. *Record of Refill, Narcotic and Liquor Prescriptions:*

Only 7 or 22.6% reported that they did not record refills, narcotic and liquor prescriptions.

This question has not been properly stated, for it should have been for refills only.

It is foolish to include narcotic and liquor, for state and national laws require records to be kept.

48. *Prescription Prices:*

22 or 64.7% have a schedule of prescription prices,

12 or 35.3% do not have a schedule of prescription prices.

23 or 71.8% charge less for prescriptions containing only official preparations,

9 or 28.2% do not charge less for prescriptions containing only official preparations.

28 or 80% have been able to maintain prescription prices,

7 or 20% have not been able to maintain prescription prices.

49. *Percentage of Prescriptions Filled That Are Narcotic:*

Average, 7.76%; typical, 8.25%; high, 20%; low, 1%; range: 14 from 1%-5%,

12 from 6%-10%, 5 from 11%-15%, 1 from 16%-20%.

50. *Percentage of Prescriptions Filled That Are Refills:*

Average, 33.1%; typical, 33.3%; high, 66.6%; low, 5%; range: 12 from 5%-25%,

21 from 26%-50%, 1 from 51%-67%.

51. *Filling of Liquor Prescriptions:*

16 or 45.7% fill liquor prescriptions,

19 or 54.3% do not fill liquor prescriptions.

Of those that fill liquor prescriptions, the average number filled per day ranged from

2 to 20, the average being nearly six. 1 charged \$2.25 per pint, 1 charged

\$2.50 per pint, 11 charged \$3.00 per pint, 3 charged \$3.50 per pint.

52. *Amount of Mail Order Business:*

Twenty-three reported that they did a good percentage of mail order business, while

12 reported that they did not. Too few submitted the actual or approximate percentage to make a detailed analysis.

53. *Manufacturing of Galenicals and Other Preparations:*

All but 2 reported that they manufactured galenicals and other preparations as much

as possible, while all but 4 believed that the druggist could manufacture these preparations profitably.

54. *Types of Prescriptions Filled by Registered Pharmacists:*

All stores reported that all prescriptionists fill all types of prescriptions.

55. *Type of Containers and Closure:*

17 favored corks, 16 favored screw caps, 2 used both.

Only 5 of the 35 reporting had their name stamped on bottles. 9 used boxes for capsules, pills, etc., 8 used bottles for capsules, pills, etc., 18 used both boxes and bottles for capsules, pills, etc.

56. *Number of Prescriptions Written in Metric:*

Average, 14%; typical, 5%; high, 50%; low, 0%; range: 19 from 0-5%, 7 from 6%-10%, 2 from 11%-30%, 7 from 31%-50%.

Of these stores, only 2 convert from metric to apothecary, while all others filled in metric.

57. *Indication of Size of Empty Capsule on Capsule Prescriptions Filled:*

Only 1 reported that he did not indicate size of empty capsules on capsule prescriptions filled.

58. *Average Price of Prescriptions Filled:*

Average, \$0.997; typical, \$1.00; high, \$2.50; low, \$0.65; range: 3 from 65¢-70¢, 5 from 71¢-75¢, 3 at 85¢, 4 from 86¢-95¢, 5 from 96¢-\$1.00, 6 from \$1.01-\$1.05, 3 from \$1.06-\$1.10, 3 from \$1.11-\$1.50 and 1 over \$1.50.

59. *Frequency of Types of Prescriptions Filled:*

1, Liquids; 2, Capsules; 3, Tablets; 4, Powders; 5, Ointments.

60. *Frequency of Receiving Prescriptions Calling for Items Not Stocked:*

All but 4 reported that they did not frequently receive prescriptions calling for items not stocked. All reported that the un-stocked items were new proprietaries.

61. *Prescriptions from Dentists:*

5 receive no prescriptions from dentists; 6 receive less than 1%; 14 receive 1%; 7 receive 1%-5%.

62. *College Graduate Requirements:*

14 reported that they required registered pharmacists to be college graduates, 17 reported that they did not require registered pharmacists to be college graduates.

63. *Attitudes toward Schools of Pharmacy and Pharmacy Course:*

23 approved of the four-year pharmacy course,  
7 did not approve of the four-year pharmacy course.

Those that approved of the four-year pharmacy course did so for the following reasons: 2, raises standard of pharmacy; 3, reduces the number of graduates; 3, gives more general education; 3, produces higher type of men; 7, produces better equipped and more capable men; 1, impresses physicians and public; 1, greater help to professional pharmacy.

Those that did not approve of four-year course did so for the following reasons: 1, students are spending their impressionable years in college and coming out with no knowledge of practical pharmacy; 1, capable men are handicapped; 1, one or two years of training are ample.

Suggestions for improvement of pharmacy courses:

6, give more practical work and less theory; 3, require actual merchandising experience before graduation; 2, have teaching and talks by active professional pharmacists; 3, give more professional and laboratory training; 3, restrict enrollment.

64. *Demand for Pharmacy Graduates:*

18 considered the supply of pharmacy graduates greater than the demand,  
5 did not consider the supply of pharmacy graduates greater than the demand.

65. *Observance of Pharmacy and First Aid Weeks:*

23 observe Pharmacy and First Aid Weeks,  
8 do not observe Pharmacy and First Aid Weeks.

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THE DEBT OF AMERICAN PHARMACY TO BENJAMIN FRANKLIN  
AND HIS PROTÉGÉ, JOHN MORGAN.\*

BY JOSEPH W. ENGLAND, PH.M.

The dominant characteristic of Benjamin Franklin (1706-1790) was his amazing versatility. He was, in the tribute of George Washington, "venerated for benevolence, admired for talent, esteemed for patriotism and beloved for philanthropy." He left the impress of his personality upon practically every phase of

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