

THE DEPARTMENT OF THE AMERICAN ASSOCIATION OF COLLEGES OF PHARMACY

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DEPARTMENT.

Editor's Note: Recently a state board member complained to me because as he said "No matter how simple a question I may ask about products of the National Formulary, I find that graduates have difficulty in answering it." We must recognize the fact brought out so well by Dr. W. J. Husa in the paper which follows, that the National Formulary is coming into use more and more and therefore we must see to it that our students are familiar with it and appreciate its value in the conduct of their drug stores. Dr. Husa's paper is timely and practical.—C. B. JORDAN, *Editor*.

THE NECESSITY FOR INCREASING EMPHASIS ON THE N. F. IN PHARMACY COURSES.

BY WILLIAM J. HUSA.*

In pharmaceutical education, the United States Pharmacopœia has traditionally received greater emphasis than has been accorded to the National Formulary. Forty years ago, the U. S. P., with its prestige based on seven decades of useful service, must have towered above the embryonic N. F. in the minds of pharmacists. However, with the passing of the years, the N. F. increasingly justified its existence, and in 1906 the Federal Food and Drugs Act made it a legal standard, thus placing it on a par with the U. S. P. in legal standing.

In any comparison of the U. S. P. and N. F. it is necessary to consider the fundamental distinction between the two books, which is that the U. S. P. admits drugs on the basis of therapeutic usefulness, and aims to keep at a minimum the pharmaceutical preparations of these drugs, while the N. F. is essentially a book of pharmaceutical formulas, selected on the basis of their use by physicians but with no indorsement of their therapeutic worth, this being left to the judgment of the individual physician.

As pharmaceutical educators, it is worth our while to consider where the difference in scope between the U. S. P. and N. F. is leading us, and to give thought to other developments which seem to call for a revision of the content of our pharmacy courses.

The changes which have been taking place with successive revisions of the U. S. P. are reflected in the statement of a prominent retail pharmacist, who said that in his earlier experience, four or five copies of each revision of the U. S. P. were worn out by use in his store, while more recently one copy has lasted more than ten years. On the other hand, in recent years, many pharmacists have been saying that they use the N. F. a great deal more than the U. S. P. We see here a definite trend which merits the thoughtful attention of every teacher of pharmacy.

The reasons for the fact that many retail pharmacists are using the N. F. more than the U. S. P. are not far to seek. In the first place, by steadily pursuing the declared policy of keeping pharmaceutical preparations at a minimum, the U. S. P. is becoming more and more a book of standards for individual drugs, and is thus

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naturally of more direct usefulness to manufacturers and enforcement officials than to retailers. Furthermore the complexion of the list of drugs is changing, with the inclusion of increasing numbers of synthetics and biologicals, which require less compounding on the part of the pharmacist, so that there is less frequent necessity for referring to the U. S. P. Then there is the spirit of therapeutic nihilism driving many drugs and preparations from the U. S. P., it being easier to superciliously throw a drug overboard than to study out the exact conditions of successful use which led to its reputation. Some authorities think that too much emphasis has been placed on pharmacological methods in matters of deletion of drugs. For example, it may not be possible to demonstrate the effect of an antipyretic on a dog of normal temperature. The fact that a drug has been found useful by generations of practicing physicians should carry due weight. Let us remember that chaulmoogra oil was used for leprosy for centuries before its value was demonstrated in a scientific way, and that burnt sponge, which contains iodides from sea water, was used in cases of goiter for a thousand years before iodine was recognized as an element. Cod Liver Oil was used empirically for generations before vitamins were discovered, meanwhile bearing the brunt of much criticism to the effect that it was no better than other fats.

With these changes in the U. S. P. the types of preparations which can be made by the pharmacist have been shifting to the N. F. For example, there are two elixirs in the U. S. P. and 65 elixirs in the N. F.; there are 3 emulsions in the U. S. P. and 5 in the N. F.; of fluidextracts, we find 26 in the U. S. P. and 104 in the N. F.; of liniments there are 5 in the U. S. P. and 10 in the N. F.; of solutions there are 23 in the U. S. P. and 37 in the N. F.; of mixtures there are 2 in the U. S. P. and 13 in the N. F.; of ointments there are 18 in the U. S. P. and 19 in the N. F.; of syrups there are 18 in the U. S. P. and 37 in the N. F.; of tinctures there are 40 in the U. S. P. and 55 in the N. F.; etc. The N. F. also contains many other types of preparations such as petroxolins, sprays, mulls, oleates, dermatologic pastes, dental preparations, veterinary preparations, etc. The presence of the various preparations in the N. F. is based on extensive surveys showing the extent of use of all items by physicians of the U. S. The group of N. F. preparations might thus be thought of as an All American selection, chosen by the physicians of the nation, the vote being the truest possible one, that of actual use.

It is thus easy to understand the increasing use of the N. F. by pharmacists. In bringing N. F. preparations to the attention of his local physicians, the pharmacist is thus making available to them the preparations found most useful by physicians of the U. S.

However, the policy of basing admission to the N. F. on the extent of use has a very serious drawback. According to a line of reasoning now popular in pharmaceutical circles, when Edison was about to construct the first electric light plant, he should have made a survey of the country, which would have shown that there were no electric light plants in use, therefore he should have concluded that he should not start one.

There should be a place in the N. F. for new preparations which should be introduced, featured and used in the same manner that new proprietaries or specialties are launched, otherwise the N. F. will stagnate. Research should be sponsored on new preparations, new combinations incorporating modern scientific

medical ideas. These products should be subjected to thorough pharmacological and clinical tests.

Although the N. F. does not take the responsibility of indorsing the therapeutic value of its items, this policy should not deter the pharmacist from detailing the physicians with N. F. preparations, since we need only recall that the N. F. contains preparations of such drugs as the cinchona alkaloids, the bromides, strychnine, cod liver oil, cascara sagrada, iron, salicylates, senna, belladonna, santonin, ipecac, opium, digitalis, calomel and many other preparations containing drugs of unquestioned therapeutic value presented in combinations which have been found useful by physicians.

The increasing use of the N. F. by pharmacists makes it necessary that we place increasing emphasis on the N. F. in our pharmacy courses. Our conference here to-day gives us the opportunity of exchanging ideas regarding methods of teaching and content of courses which will place proper emphasis on the N. F. Our teaching could well be aimed to inspire some constructive thought on the part of the students, so that they will view the N. F. as a living, growing project which is theirs to use and to develop to an ever-increasing extent in the upbuilding of the profession of pharmacy in its service to humanity.

EXTRACTS FROM THE SUMMARY OF PROCEEDINGS OF THE 1934 MEETING OF THE AMERICAN ASSOCIATION OF COLLEGES OF PHARMACY.

The 35th annual meeting of the American Association of Colleges of Pharmacy was held May 7th and 8th. Eighty-six delegates from forty-four member colleges were in attendance.

Dean Theodore J. Bradley presented a memorial on the death of Prof. Florin J. Amrhein.

The address of President L. D. Havenhill is printed in the May number on pages 462 to 470.

Secretary-Treasurer Zada M. Cooper reported a membership of fifty-seven colleges with one in arrears for dues. A second series of visits to member colleges was completed early in the year.

Cash on hand amounted to \$1233.58. The report was accepted and an Auditing Committee appointed.

Chairman C. B. Jordan, of the Executive Committee, submitted the following relative to fifty-five colleges reporting: The total number of entrants for 1933-1934 was 1902; the number of High School graduates, 1894; the number of special students, 8; the number that had previous college training, 500. This report shows an increase of 7% over that of 1932 to 1933; the number of students having previous college training increased 3%; the total by 26.3% of all entering students.

The report contained the following recommendations, which were adopted:

(1) That a committee of three be appointed to cooperate with similar committees of the N. A. B. P. and the A. Ph. A. to assist in straightening out code matters.

(2) That credits earned in a standard college, one recognized by the state educational department or by the state university in which it is located, may be accepted for face value in a college of pharmacy in so far as such work applies in the course in pharmacy, but, regardless of amount of credit offered, no student will be permitted to complete the course in pharmacy in less than two collegiate years. This recommendation was made a part of Paragraph 3 of Article VII of the by-laws.

(3) That the Association request the American Council on Pharmaceutical Education to proceed without further delay to perform the functions for which it was created and that the secretary inform the President of the American Council on Pharmaceutical Education of this request.

(4) The American Association of Colleges of Pharmacy is vitally interested in any attempt to improve the control of the sale and the advertisement of food, drugs and cosmetics, and it goes on record as highly in favor of legislation that will properly protect the public against the advertisement or sale of fraudulent, misrepresented, poisonous or deleterious food, drugs or cosmetics.