

SECTION ON EDUCATION AND LEGISLATION

NOTES ON TEACHING DISPENSING.*

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The teaching of dispensing in colleges of pharmacy is not limited to that particular time when the student stands before a prescription counter and actually compounds a physician's prescription under the guidance of an instructor, but this paper is limited largely to that phase of the subject.

It is during this time that the training in other departments is under trial. Prescription filling is a continual test of the student's previous training in the technic of pharmaceutical manipulation, such as the making of ointments, suppositories, powders, pills, capsules, coatings for the latter, emulsions, sterilization methods, as applied to ampul filling, and the making of other sterile products, together with the many other manual operations of modern pharmacy. Also the theoretical and laboratory training in chemical reactions, and knowledge of the results following both chemical and physical combinations, are constantly demanded. In other words, it is essential, for the rounding out of dispensing training, that the student be first well grounded in the basic principles of pharmacy, both theoretical and practical, these becoming in reality a part of the elementary work in dispensing, and only when this elementary work has been covered is the student best able to understand prescription filling and to accomplish results which would be otherwise impossible.

The actual dispensing of prescriptions, therefore, assumes an important place in the last few months of a student's training, and incidentally demonstrates, as ordinary examinations rarely do, the general ability of the student, and also gives evidence of his character and ideals.

First, it is necessary that the proper equipment be provided. Utensils, weights and balances, containers, labels, wrapping paper, and all the essentials for first-class prescription filling must be at hand, and it is of the utmost importance that these be the best available, if the student is to establish high ideals for his prescription work.

Second, prescriptions must be selected for study and compounding which are typical of all forms of modern prescriptions of a routine character, and also others which are unusual and difficult, or represent incompatibilities, requiring special skill and knowledge. It is desirable to have, in addition, illustrations of Latin abbreviations and also the more common foreign types, etc., so that the training will be broad and thorough.

Third, the discipline should be strict, all work should be conducted seriously, and inferior work not countenanced or accepted. A definite plan of procedure should be adopted and enforced without exception, the penalty being the loss of all credit for the work done.

These points are emphasized because it has been found that, while some students will be willing to follow a system on request, others, and usually the majority, need the stimulation of good control and constant verification of the accuracy of their work.

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The routine suggested for the filling of the prescription is as follows:

1. Study the prescription as a whole, thoroughly understand it, and decide upon the method of procedure.

2. Place on the counter all of the containers of ingredients needed, in the order to be used and on the left-hand side of the balance.

3. Fill the prescription and place the product in the container, capping it, if a bottle. As each ingredient is weighed or measured, the container is placed on the right-hand side of the balance, thus serving as a check on the ingredients added, should the compounder be called away.

4. Write the main label and attach it, together with any other labels, such as "Shake well," "Copy," etc.

5. Check the prescription to an assistant, repeating the ingredients and their quantities, and also the writing on labels.

6. Price the prescription in accordance with a definite pricing schedule. The N. A. R. D. schedule is satisfactory for the teaching of a system, and it may be explained to the student that neighborhood conditions may require, at times, either an increasing or decreasing of the amounts there fixed.

7. Wrap the prescription and attach a delivery card or label.

No effort should be spared to stimulate the best grade of work throughout, and the plan which follows is offered as especially valuable.

It is an unfortunate fact that the student's viewpoint is naturally that of desire to get a little more credit than he actually deserves. He is constantly striving to show only his best side and cover up his weaknesses, and this attitude often prevents accurate rating. In order to alter this condition, a number of students are selected for each lesson to serve as assistants. There should be at least one assistant for each five students.

These assistants are taken aside, after the rest of the class are assigned the prescriptions for the day, and especially instructed in that day's work. Each of the prescriptions is studied from the several viewpoints, and then the duties of the assistants are explained.

In order that the instructor may retain an immediate supervision over all details of the class-work, the following plan is followed: The name and desk number of each student is written in a small note-book which is carried in the hand, and the date and the numbers of the prescriptions to be filled have been inserted beforehand under each name.

The instructor starts at a definite point in the laboratory and systematically passes along the desks, the assistants following. As any student completes a prescription, he asks to have it checked, at which time the instructor takes up the main points, such as the quality of the product, that the label is up to the standard, that the containers for ingredients are on the counter, etc., and, if approved, he then enters a memorandum in his note-book that that student has filled that prescription. The assistant has been standing by his side during the inspection, and if the prescription is passed, the instructor says, "Mr. Williams, Mr. Hays will check the prescription for you." Mr. Hays makes a note on the memorandum he is carrying that he is checking Prescription No. 175461, or whatever it may be, for student No. 68, which happens to be Mr. Williams's desk number. Mr. Hays, the student assistant, at once assumes a new attitude. He is to report to the instructor in a few moments on a number of points, and he becomes alert, observant, critical, and dignified. The responsibility steadies and draws out the best ability of almost every student.

It has been a rare experience to find one who did not measure up to the require-

ments, if the proper instruction has been given previously, and if it had been made clear that unfairness would bring immediate dismissal.

As soon as the checking has been completed, the assistant steps into the line for the next opportunity to check, but before he is assigned a new prescription he reports to the instructor on the one assigned to him previously. This report covers the following points:

1. Every ingredient must have been the correct one and the weight or measure that directed by the doctor.

2. The product must be creditable.

3. The label must be absolutely correct, including number, date, patient's name, directions and doctor's name.

These three points are considered the most important. They must all be approved before the prescription can receive any credit, since they are all essential.

The remaining points are then taken into consideration to determine the actual mark, and this may be "poor," "fair," "good minus," "good," and "good plus." These terms were selected because it was found that students will express values much more uniformly in terms of this character than by a numerical rating. They may afterwards be assigned a numerical value, if desirable.

The additional points noted are:

4. The correct Latin form of the written prescription.

5. The use of full official English titles in referring to the ingredients; and the use of proper terms in speaking of quantities.

6. The degree of perfection reached in finishing such products as powders, suppositories, emulsions, ampuls, capsules, pills, etc.

7. The perfection of the package, including label writing, capping of bottles, and the wrapping of bottles, boxes, etc.

It has been found possible by this plan, successfully used for about ten years, to handle a section of from sixty to seventy students in prescription filling and yet check up the details of their work with great exactness.

The entire class is stimulated to do superior work, and the assistants of each day, seeing the work of from fifteen to twenty students, discover both defects and perfections which have not impressed them before, and hundreds have testified that they returned to their own desk after this experience with advanced standards and with a determination to do better work.

ORGANIZATION.

The writer does not necessarily know more than the reader, but he must organize his facts and march truth in a phalanx.

In painting, your success hangs on your ability to organize colors and place them in the right relation to give a picture of the scene that is in your mind.

Oratory demands an orderly procession of words, phrases and sentences to present an argument that can be understood by the average person.

Music is the selection and systematization of the sounds of Nature.

Science is the organization of the common knowledge of the common people.

In Nature everything lies in the mass—materials are a mob—a man's measure is his ability to select, reject or organize.—Elbert Hubbard.