

THE DEPARTMENT OF THE AMERICAN CONFERENCE OF PHARMACEUTICAL FACULTIES

A SYMPOSIUM ON METHODS OF TEACHING COMPOUNDING IN THE CONFERENCE SCHOOLS.

[Editor's Note: The Editor has in his possession a series of articles, written by men prominent in pharmaceutical education, descriptive of methods used in various schools in teaching the art and science of compounding. He believes the publication of these articles will be helpful to all teaching institutions and instructive to members of Boards of Pharmacy. The first two published will be those written by W. F. Rudd of Virginia, and F. J. Wulling of Minnesota.

RUFUS A. LYMAN,

Chairman Executive Committee
and Conference Editor.]

The School of Pharmacy at Richmond is an integral department of The Medical College of Virginia, a state-supported institution, with schools of medicine, dentistry and pharmacy and a hospital division operating three hospitals. For many years we have endeavored to correlate in every way possible the teaching in all of the schools, believing that the future of the health of our people is dependent upon the thorough education of and full cooperation among the members of these professions. The students in the three schools live together, are taught in the same laboratories and in many instances have the same teachers, though the classes are separate. Thus, early in life, each group comes to know the problems of the other groups, and a spirit of professional appreciation is engendered, which continues when the men go out into active practice.

The college buildings are situated in the heart of the industrial and poorer residential section of Richmond with its population of 171,000. The Medical School has therefore been able to build up a large and most successful out-patient clinic; at the present time, approximately 30,000 patients come to this clinic annually. The School of Pharmacy is able to utilize this for a prescription clinic, which we have come to regard as the most vital and in many ways the most efficient part of our teaching.

The dispensing room, in which the prescription work is done, was planned by the architect as a model drug room with eight dispensing departments. Each of these is fitted with all of the equipment necessary for prescription work.

The senior pharmacy class, which averages from 25 to 35 students, is divided into 4 sections, and each section works 8 weeks in this department. The Professor of Pharmacy, the Associate Professor of Pharmacy and an assistant give their closest supervision to every detail in connection with this work. Every prescription that comes from the medical clinic is a bona fide one and in a clinic of such proportions they cover a wide range. Every step in the work, reading, compounding, quantities, labeling, wrapping and returning to patient is checked by one or more of the instructors in charge. Each student knows when he begins work in this department that if any one of the instructors is not thoroughly satisfied with the quality of work he puts out, such a student will not even be considered for graduation. The Associate Professor of Pharmacy who has charge of the didactic course which consists of 48 hours of class work, in the Art of Compounding (Scoville's text), and in Incompatibilities in Prescriptions (Ruddiman's text), has ample opportunity to connect the didactic and the practical in this department and he does this with most excellent results. The student has access during this work to all the reference books which may throw light upon what he is doing and is encouraged to use these references freely.

It is hardly necessary to state that each student keeps an individual prescription file, and that work in this department must be done with all the neatness of which the individual is capable.

We believe that the methods outlined above are enabling the School of Pharmacy of the Medical College of Virginia to send out graduates who are thoroughly trained in both the principles and practice of prescription work. We have planned the course at considerable cost, and with a degree of care that its importance seems to merit. Each year shows us some detail which may be improved. The plan is not yet perfect, but we are hoping to develop it to a point where little is to be desired to make it a model. If our fellow teachers can make suggestions that will make it more efficient, we will be deeply grateful.

(Signed) WORTLEY F. RUDD, *Dean*.

The College of Pharmacy of the University of Minnesota is in charge of the drug rooms of the University Medical School Out-Patient Department and of the University Hospital so far as the dispensing of prescriptions is concerned. We consider ourselves very fortunate indeed in having secured about twenty years ago the opportunity for practical dispensing experience for our seniors. Through the efforts of this college quite a number of years ago the matter of formulating prescriptions instead of designating proprietaries was taken up with the physicians of the University Hospital and of the dispensary staff. I claimed that our students had a right to compound prescriptions rather than merely to take something off a shelf. Instruction has now been given for many years in the Medical School in pharmaco-dynamics and this instruction has been related to prescription writing and as a result the clinicians and the advanced medical students including the interns are writing as a rule a fairly large percentage of well-formulated prescriptions the dispensing of which affords most valuable experience to our seniors. The total number of physicians' prescriptions dispensed largely by the seniors under strict supervision and instruction of competent instructors and assistants reached a total of 24,879 during the year ending June 30, 1921. The number of prescriptions dispensed annually has been for a number of years now in excess of 20,000. This prescription practice supplements and corresponds with the didactic and laboratory work in the regular college course in dispensing and incompatibilities here in our own building. This course occupies six hours weekly for the entire senior year. The drug rooms of the dispensary are located in another building.

As stated above our dispensing work runs through the year and includes therapeutic, pharmaceutical and chemical incompatibilities as well as the critical study of the prescription and practical work in dispensing a wide range of prescriptions taken from actual medical practice. This work is done in our senior year. The total credit for this work is 18 (with us a credit is one hour of lecture or recitation or two hours of laboratory work per week per quarter). The students entering upon this work have had two solid years of preparation. They have finished all of their general analytical and pharmaceutical inorganic and organic chemistry, materia medica, pharmacognosy, pharmacopoeial testing, operative pharmacy, pharmacy, etc. The work in dispensing is done concurrently with pharmacopoeial assay, bacteriology, food and drug analysis, physiology, mineralogy and crystallography. I tell you this because we are at variance with those who feel that the actual work of dispensing be taught advantageously in earlier periods of the course.

The work in dispensing is conducted by Full-Professor G. Bachman, assisted by Instructors Turner, Chittick, Bruce and Vogel. The dispensing laboratory in the Pharmacy building is very completely equipped and is not used for any other purpose. Here typical prescriptions of a wide range taken from active prescription files and from textbooks and laboratory manuals, are studied theoretically and dispensed practically. Students receive class and personal instruction and drill. Concurrently with this work the class in dispensing does the major part of the actual dispensing in the University Free Dispensary. The administration of this dispens-

ary and of the drug room in the University Hospital is dual, the College of Pharmacy carrying the work of supervision relating to the dispensing of prescriptions. The person in charge is designated University Hospital Pharmacist. The salary is paid jointly by the Medical School and the College of Pharmacy and his nomination is made jointly by the two schools. The hospital pharmacist must be of the rank of instructor or of a higher rank and in his capacity as instructor he is a member of the Pharmacy faculty and responsible to the Dean of Pharmacy in all work in which the College of Pharmacy has supervision. This position has always been filled by a graduate of the College of Pharmacy. (Recently Dr. Oscar Blosmo, who had occupied the position for many years, resigned to practice medicine. He was superseded by a young woman graduate, Miss Hallie Bruce, who is assisted in the dispensary instruction to our students by another woman graduate, Miss Vivian Vogel.) Professor Bachman has charge over these but because of the very complete organization which we have developed, very little of his time needs to be given to the dispensary oversight. Occasionally I give personal attention to the work there.

For the purpose of this dispensary practice work the senior class is divided into eight or more sections in order to keep the number in each section as small as possible for the purpose of the maximum personal instruction. The dispensary is open afternoons and one section is in attendance every afternoon from 1:00 until about 4:30 or 5:00. The section at work in the dispensary is absent from whatever other laboratory work occurs that afternoon in the Pharmacy building. The section is not excused from this other work but has to make it up. All laboratories are open Saturday mornings for make-up work.

The dispensary prescription work is not done entirely by the students because there are times of rush in which the instructors must also dispense but their primary work is to instruct the students and supervise their work. Great care is exercised in checking work, materials, weights and measures. We have no record of any errors made in the dispensing of about a quarter million prescriptions. The fact should be emphasized that most of the prescriptions filled are formulated ones, written by medical students in their last year, interns and by the physicians and surgeons in charge of the various clinics. The prescriptions written by the advanced medical students are supervised by the heads of the respective clinics. The College of Pharmacy has been able to do constructive work along these lines because through its influence, which began years ago, proprietaries are rarely prescribed. The hand-me-downs that one finds in some dispensaries are entirely absent.

The total number of prescriptions dispensed largely by the senior pharmacy class under the supervision and instruction of Instructors Blosmo and Bruce during the year 1920-21, is exhibited by the following table by months:

July 1920.....	1922	January 1921.....	2187
August.....	2078	February.....	2182
September.....	2086	March.....	2286
October.....	2014	April.....	1921
November.....	1884	May.....	1888
December.....	2226	June.....	2205
		TOTAL.....	24879

This prescription practice supplements and corresponds with the didactic and laboratory work in the regular college course in dispensing and incompatibilities.

The indications so far are that the number of prescriptions during the current year will exceed the total of last year.

In this connection it may be interesting to know that the greater bulk of the preparations dispensed in the Free Dispensary are made by the advanced students in the College of Pharmacy, of course under the strictest supervision. Students

in pharmacy therefore have the dual experience of making all of the preparations of the U. S. P. and the N. F. which are dispensed in the Free Dispensary. The College of Pharmacy is reimbursed for the cost of materials.

The equipment of the Dispensary of the College of Pharmacy is very excellent. All apparatus is of the highest quality including the balances and weights.

This college, I understand, is unique because of the fact that it renders considerable service to many of the university divisions and to many persons and agencies outside of the college and the university. Our service here at the university reaches the University Hospital, Free Dispensary, Health Service, Dental College, all of the Departments of the Medical School requiring medicines and preparations of various kinds (especially pharmacology, physiology, pathology, etc.), vterinary Department, Athletic Association, Department of Psychology, University Storehouse, etc.

(Signed) FREDERICK J. WULLING, *Dean.*

PROCEEDINGS OF THE LOCAL BRANCHES

"All papers presented to the Association and its branches shall become the property of the Association, with the understanding that they are not to be published in any other publication than those of the Association, except by consent of the Committee on Publication."—By-Laws, Chapter X, Art. III.

Reports of the meetings of the Local Branches should be mailed to the Editor on the day following the meeting, if possible. Minutes should be typewritten, with wide spaces between the lines. Care should be taken to give proper names correctly, and manuscript should be signed by the reporter. To maintain its activity and representation each branch should see that at least three of its meetings during the year are reported in the JOURNAL.

CHICAGO.

The 122nd meeting of the Chicago Branch of the American Pharmaceutical Association was held at the Hotel LaSalle Friday evening, December 16, with President C. M. Snow in the chair.

Preceding the meeting a host of friends of Dr. and Mrs. Henry Kraemer, guests of honor, gathered for dinner.

Dr. Kraemer addressed the meeting on
PHARMACY—ITS PROBLEMS AND THEIR
SOLUTION.

His talk was illustrated with lantern slides and he presented, in a most interesting way, a number of newer propositions that are up in pharmacy and in medicine. A few of the most interesting points he presented are as follows:

TOOTH CLEANSING AND POLISHING.

Illustrations of Dr. Bunting's tooth brushing machine and the effects of 10,000 double strokes of the brush on human teeth—equivalent to ten strokes a day for a period of three years, and of the sets of teeth that had been so brushed with various tooth preparations. The erosion effected by diluted vinegar amounted to one one-thousandth of an inch in depth.

Pastes containing grit resulted not only in erosion but in a smeary appearance. Pastes and powders containing coarse grits not only cut deep grooves but left a dull appearance, fine grits giving the enamel a high polish and white appearance. Jungman's Tooth Powder gave practically no wear of the enamel, but it gives a high polish, due to the tin oxide. The formulas for the two best tooth powders known are as follows:

Blair's Formula.

Strontium oxide.....	20
Calcium carbonate.....	76
Soap.....	3
Catechu.....	1
Flavor	

Dissolve the soap in about 4 parts of water and mix intimately with about 25 parts of precipitated chalk, and dry at moderate heat. Dissolve the catechu in 5 parts of alcohol and intimately mix with 25 parts of precipitated chalk; mix equal parts of oil of wintergreen and oil of sassafras with the remaining 25 parts of precipitated chalk, using about 6 drops of the mixed oils for each 100 Gm. of the powder. Mix the three portions and sift through a bolting cloth. Follow about the same pro-