

of the work should take care of the financial standing of the pharmacy, and the office, which connects with the dispensing room, should contain files, reference books, pharmaceutical journals, a desk and a typewriter.

Just as the hospital pharmacy can be helpful to the pharmacy student, so it can also be of service to the student in medicine. The two lines of study should work hand in hand—each one with its own problems—but these more easily solved by coöperative effort.

Some six weeks ago one of the medical students brought his freshly dried, California-grown digitalis leaves to us to make a tincture so he could test them physiologically. In fact he did the work under our supervision and it occurred to me that a little practical pharmacy would be useful to every medical student. However, it is a waste of time if the student shows no enthusiasm in his work.

With the community in general, teaching can also be accomplished. This requires the greatest diplomacy and tact for we deal with irritable people, people who are ill. We try to teach the people that medicines should be refilled only when ordered to be refilled by their physician, that judgment should be used in the giving of medicines—a medicine that has helped you may not be the correct one for your neighbor. The university hospital has rules on these points and we follow them implicitly. The patients are always referred to the physician before the prescription is refilled.

To sum up—the pharmacy of a hospital is a good place to teach correct principles of pharmacy. This teaching can be made to help not only the student in pharmacy, but also the student in medicine, and indirectly the general community.

THE STATUS OF CLINICAL SERVICE AS A PHASE OF PHARMACEUTICAL SERVICE.*

BY JOHN C. KRANTZ, JR.

During the past decade the pharmacists of this country have watched with increasing curiosity the ever-growing commercial phases of the retail drug store. To those pharmacists who are inclined to like the buying and selling of merchandise rather than the filling of physicians' prescriptions, this metamorphosis of the drug store was rather agreeable and profitable. However, to the college-trained, profession-loving pharmacist, this condition not only discouraged his hope for an ethical pharmacy but seemed to defeat the very purpose of his professional education.

In more recent years, especially since the close of the great war, men have not entered professional schools in a haphazard and careless manner, but they now carefully consider the outlet for the product the school produces and how, having once obtained the education, it can best be used to serve his fellow-man and sustain his own livelihood. In pharmaceutical training this presented a singular problem: was the embryonic pharmacist to spend his money and time in college to receive a professional education and then to expend ninety-three percent of his after-life doing commercial work? However, the large majority are still con-

* Read before Section on Practical Pharmacy and Dispensing A. Ph. A., New Orleans meeting, 1921.

tent with this great extravagance of time and wasting of professional training, but it is the ethical youth, the probable five percent from each graduating class in pharmacy, who are not satisfied with this condition but seek to put into practice their attainments from hard work at college.

The question now arises, is there any phase of pharmacy, as practiced, sufficiently professional in character to warrant the attention of these men with truly ethical ambitions? In practical experience the question has been answered in many ways. Some have studied medicine, others have gone higher into chemistry, whereas others have gone into the laboratories of manufacturing pharmacists. However honorable and attractive these mentioned vocations might appear, no matter into which the individual enters, to the laity he loses his identity as a pharmacist.

There have been certain men with sufficient courage and red blood in their veins to undertake the tremendous task of revolutionizing the retail drug store and establishing for themselves a position in the community of professional standing. This, to the author's mind, is the real solution of the problem and an excellent outlet for the ethical five percent of the graduates in pharmacy.

Pharmacists with sufficient initiative have undertaken the establishing of prescription pharmacies, which however ethical in character have never been found to yield even a moderate compensation for the effort put forth. The pharmacist must seek other fields, and here lies open before him the great promising field of clinical service into which the well-trained man enters, who shuns commercialism as the path of least resistance into which his brother druggist has fallen. The questions likely to come to the readers' minds are: What is meant by clinical service? With which part of the service is a pharmacist familiar? Does it yield sufficient pecuniary returns? How may a pharmacist secure a practice of this character? It is the purpose of the author to briefly answer these several questions, hoping the advantages as emphasized may act as a stimulus to pharmacists to participate in clinical service.

Clinical service, in its broadest meaning, embraces anything done to expedite the recovery of the sick, whether at the bedside of the patient or at the laboratory of the clinician. The pharmacist, in the daily routine of filling prescriptions, truly renders valuable clinical service, but his rôle is not large enough. There are others who are rendering the major part of this service and in consequence are receiving the larger financial returns. For example, the clinicians in a large hospital examine daily the urine of hundreds of patients and are rendering other clinical service which could be rightfully claimed by the well-trained pharmacist as a chemical procedure with which he is familiar.

This phase of clinical service is not only practiced in the hospitals but forms an important part of the modern practitioner's diagnosis. Recently a physician of no little eminence in Baltimore remarked that under no condition would he allow a patient to be discharged from his care until a complete analysis of the urine had been made. Now assuming this physician examined ten patients daily, and his neighboring pharmacist filled the ten prescriptions he had written at an average price of seventy-five cents each, he would have made on the several transactions a net profit of five dollars. Were the same pharmacist equipped to make the complete urine analysis of the same ten patients he would have collected a minimum fee of three dollars each which is practically clear profit. His compensation would

have been thirty dollars additional, or an increase of six hundred percent. The case cited is only theoretical; however, in practice, those pharmacists engaged in such work will testify to the increased financial return gained by such service.

The examination of urine, however, is only a small branch of a large field of important work. All reputable pharmacy schools give thorough courses in bacteriology and the pharmacist of to-day with very little additional effort can equip himself to do commercial bacteriological work. Such work would naturally include the examination of urine, milk and water for micro-organisms, the isolation of pathogenic organisms in sputum and other body fluids, and other miscellaneous work, such as the preparation of sterile media, etc. This is a tremendous field for work of a truly professional character. The author knows of a pharmacist residing in Maryland, who, immediately after announcing his intention to do such work, secured the task of examining the entire water supply of a railroad, which yielded excellent monthly returns. This is but one instance of success in this line of work, and there are others sufficiently numerous to render it an attractive field for the well-trained graduate in pharmacy.

Another branch of clinical service can be easily inaugurated in the profession of pharmacy by the pharmacist making direct use of the chemical training he has received. The modern physician is a great user of standard solutions and other chemical reagents. These can be supplied very conveniently by the pharmacist, and in so doing he enhances his professional reputation and increases his monetary return. Not only can the pharmacist render chemical service to the physician but the laity will not be slow to learn of an innovation of this character in a pharmacy, and he can render to them chemical service in several of its minor branches.

Some advocates of clinical service in pharmacy have urged the pharmacist to enter into the work more fully and to do such service as the Wassermann test, blood count, separation of groups for blood transfusion, etc. In the author's opinion this class of service does not belong in the hands of the pharmacist, since one who is not medically trained cannot appreciate the clinical importance of such tests.

Finally, the great problem arises as to how the retail pharmacist may establish such a business as herein described. It can be done in many ways: First, by sending circular letters to physicians and other reputable citizens announcing the participation in such work; second, advertising in the drug store; third, creating a professional atmosphere in the pharmacy, and, lastly, by adequate preparation and equipment.

When one resorts to these means he seldom fails in establishing a professional business doing clinical service as a phase of pharmaceutical service, and thus solving the problem of professional standing of the American pharmacy.

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THE PHARMACIST IN THE OUT-PATIENT DISPENSARY.*

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Having never had the opportunity of visiting other hospitals or dispensaries, I am, of course, not qualified to speak of hospitals and dispensaries in general, but will limit myself to a brief description of the work conducted in the Out-Patient department of the Cincinnati General Hospital.

* Read before Section on Practical Pharmacy and Dispensing, A. Ph. A., New Orleans meeting, 1921.