

Chairman Freericks: Mr. Louis Emanuel of Pittsburg has been nominated. Any further nominations.

Mr. Louis Emanuel: I nominate Miss Zada Cooper.

The nomination for Miss Zada M. Cooper for the office of Associate Chairman was seconded by Mr. C. H. Packard of Boston, and Dr. W. C. Anderson seconded the motion that the nominations be closed for this session.

Chairman Freericks: I will put the motion with the understanding that it is for this session. The motion has been made that the nominations for this session be closed. The motion having been regularly made and duly seconded, and the question put, the same was declared carried.

Chairman Freericks: Now, are there any further nominees for the office? Mr. R. A. Kuever, of Iowa, has been nominated at this time. Mr. Kuever has been acting as secretary last year. He has, unfortunately, not been able to be with us this year.

Dr. Anderson: What are the chances of his being with us next year?

Prof. Teeters: Professor Kuever will be with us next year. He regrets it very much, and desires me to tell you that it was absolutely impossible for him to be with you. That matter was decided at the last minute.

Dr. Anderson: I move that the nominations be closed for this session. Carried.

Chairman Freericks: A motion to adjourn until 2:15 is in order.

It was thereupon regularly moved and seconded, the question put, and the motion declared carried that an adjournment be had until 2:15.

THE TEACHING OF MATERIA MEDICA IN MEDICAL COLLEGES.*

EDMUND N. GATHERCOAL, PH. G.

A plea for the better training of the physician along the lines of Pharmacy and Materia Medica, leading toward an improvement in prescription writing, which is rapidly becoming a lost art. The Author refers to investigations of the prescriptions of today and bases his findings on an analysis of 10,000 consecutive prescriptions, collated in hundreds from different parts of the country.

From the pharmacist viewpoint, the education of the physician along the lines of pharmacy, materia medica and prescription writing has never been as complete and thorough as it should have been. It is evident, however, from a review of recent medical literature that among physicians themselves, concern has arisen over the tendency to eliminate or curtail these studies in the medical college curriculum.

It goes without saying, that the medical graduate should not be expected to be as thoroughly proficient in the details of pharmaceutical manipulation,

*Presented as a part of the report of Committee on Drug Reform, L. E. Sayre, chairman and read before the Section on Education and Legislation, A. Ph. A., San Francisco meeting.

or informed upon the origin, description, constituents, etc., of drugs as is the educated pharmacist. However, the medical graduate who has first received a pharmaceutical education is at a great advantage over his fellows who have not had such an education. Between two and three percent of the graduates of colleges of pharmacy pursue medical courses and it is the common witness of these students that their pharmaceutical training is of great value to them, not only in their medical courses, but also in later practice. If the medical student received as much actual practice in prescription writing as the pharmaceutical student does in his prescription reading, the grade of proficiency shown by the physicians in this art would be much increased.

Some of the deficiencies shown by physicians in their prescription writing are well discussed by Dr. Bernard Fantus in a paper read before the Federation of State Medical Boards last year. He showed that 36 percent of 10,000 consecutive prescriptions collected in 100's from different parts of the country were written in English and 18 percent in poor Latin; this showing despite the almost universal teaching of medical Latin in colleges of medicine. His report further showed that though the metric system of weights and measures is very generally taught in medical schools it was used to but a very slight extent in prescription writing. Incompatibilities were present in about 2 percent of these prescriptions and overdoses or errors in about 1 percent of them.

To quote from Dr. Fantus: "After all, however, pharmacists do not see our worst failures in the teaching of prescription writing. I am convinced that a certain proportion of our graduates, on entering practice and finding themselves incompetent to write prescriptions, solve their problem by not writing prescriptions at all, dispensing their own remedies, with all the evil results of such practice.

"Summing up our findings, it becomes evident that there is need for considerable improvement in prescription writing. This could be secured if it were realized that prescription writing cannot be taught by lecturing or by demonstrations; that the students must be drilled in prescribing. I believe that the best results can be obtained, if a course on pharmacy and prescription writing be given before the work in pharmacology is taken up. The students should be made familiar, in this course, with the various classes of pharmaceutical preparations and their prescribing. Then, when the student enters his course in pharmacology, he is ready to write prescriptions for the remedies needed by the patients treated in the hospital and in the dispensary, and our students would leave our medical colleges well trained in prescribing."

In an admirable paper by Professor L. E. Sayre published in the Journal of the American Pharmaceutical Association last year a strong plea is made for the strengthening of the materia medica courses in medical schools. Professor Sayre says in part:

"As a matter of fact there are few who do not believe in drugs. The pharmacologist and clinician, working in their respective fields and, to a great extent, in co-operation, have contributed material to medical literature which justifies this faith in drugs. The instructor in materia medica (or systematic pharmacology) must be familiar with the result of these labors of the two branches of science and prepare his student so that when he is handed over for therapeutical and clinical work he shall be fully prepared to appropriate the results of

these researches and a thorough knowledge of the tools used in the treatment of disease."

"Herein lies the justification for the compulsory teaching of materia medica and the duty of the instructor and the entire medical faculty in seeing to it that its emphasis is not minimized."

The pharmaceutical and pharmacologic knowledge essential for competent prescription writing might be summarized as follows: The official Latin titles, abbreviations and doses of all the drugs, chemicals and preparations of the U. S. Pharmacopoeia; proficiency in the use of the tables of metric weights and measures; theoretical pharmacy regarding the galenical preparations and those for extemporaneous compounding; the active constituents of crude drugs with the relative therapeutic value of the active constituent to the crude drug itself; the relation of physiological action to chemical constitution; pharmaceutical, chemical and therapeutic incompatibilities.

Of course therapeutics, theoretical and practical, toxicology, medicine, etc. etc., are also essential and above all, as Dr. Fantus urges, a great deal of practice in actual prescription writing should be required of the medical student, for after all practice makes perfect.

ABSTRACT OF DISCUSSION.

Mr. E. G. Binz: That is a very able paper. I think it is a subject that bears close investigation and one that will strike at the nucleus of all the trouble between the pharmacist and the present practitioner.

It is a course that should have been inaugurated in the curriculum of medical schools in years past; and there is absolutely no question that if the medical schools will take up this course and follow it out carefully that it will materially improve the practice of pharmacy.

Dr. W. C. Anderson: It might be of service to some of the members who take an active part in propaganda work with the physician to know that in New York City a few years ago when we were inaugurating our propaganda work, holding meetings with physicians was found to be successful. We still continue those meetings and recently the question of teaching materia medica and prescription writing came up for discussion and we suggested that work should be done just along the lines of this paper.

The heads of the medical schools said to us: "It is a good suggestion, we realize the need for it but we cannot do it, our curriculum is full. We have all the material we can now possibly put into our teaching in the time allowed without increasing the course to a great extent. We cannot take up this work as you suggest."

We then asked them whether they had studied their curriculum carefully in an endeavor to see if there was anything in it that they could cut out so that this very important subject might be added. Perhaps I neglected to say that the conversation I referred to took place between one of the heads of the Bellevue Hospital in New York and our members. Well, the doctor at Bellevue College said he thought that was a good suggestion and he would look over it. When Dr. LeFevre came to our next propaganda meeting, the meeting of physicians and pharmacists, he said that our suggestion had appealed to them, that they had looked over their curriculum and they found that they were using a number of hours each week in teaching the physicians how to make emulsions and pills and suppositories, that we might say were absolutely unnecessary to be taught in medical colleges. We find examples of that condition in most of the medical colleges of the country, which merely take up time, which could be utilized in the teaching of therapeutics and prescription writing. And I might say that they (the Bellevue) immediately changed their course and introduced the splendid one along the lines suggested by this paper, so much so that they provided subjects out of the United States Pharmacopoeia and National Formulary. That is what is done by propaganda work, and I call attention to it in the belief that it might be of some service to others who work along this line with physicians. I believe that we

can go on year after year preaching co-operation and asking the physicians to prescribe more drugs in an ethical way, but without results. We cannot get results until the student in the college is taught the proper writing of prescriptions, and he is placed in a position where he has confidence in himself when he diagnoses a case that he can write out the prescription which can be compounded properly by the professional pharmacist.

Dr. Philip Asher: I have not heard all the paper but I believe I have heard sufficient to allow me to discuss a feature that has not come up along the line of what Prof. Anderson said. He stated that he felt that the curriculum of the medical college could be enhanced by teaching materia medica along proper lines. But there is one place where the physician can be educated and at the same time allow the pharmacist to be a source of help and education and that is the hospital apothecary. In all large hospitals the apothecary is the one to do more good towards propaganda work than anyone else. I do not know whether it would be in keeping with this paper to offer a resolution that would empower or place the apothecary in a position to teach the proper work along these lines. If the hospital apothecary would assist in the instruction of the young doctor along these lines I believe it would do more good than anything else. If the young physician is taught properly by the apothecary we will be working along better lines and it will give the apothecary a great deal more love for his work, he will know that he is doing something, in fact doing more in this line than anyone else. Take the pharmacist at large. When a young doctor starts to practice medicine he makes friends with the pharmacist, but sooner or later he drifts away. If he is properly instructed at the time he is taught medicine, I think it will really give us a very good and lasting foundation.

Dr. O. F. Claus: The same course that Dr. Anderson spoke of was pursued in St. Louis by the Retail Druggists' Association and the question was taken up with members of the medical society, and also the colleges. I am pleased to say that two of the colleges are teaching prescription writing. It is not only a great help to the young doctors but it is indeed a big help to the druggists of St. Louis.

Chairman Freericks: Would it be impossible altogether to seek to teach the medical student in the colleges of pharmacy, to interest them in some manner to give courses in pharmacy. Is that so altogether impossible? It is a question that has often arisen in my mind, and if there is anyone who can possibly have anything to say on that feature it might be helpful.

Professor E. L. Newcomb: In that connection I want to say that in our prospectus we make provision for such teaching. We have been in existence fifteen years and no student has availed himself of the opportunity. I have heard medical students say they do not get enough of pharmacy, that there are certain things they would like to know about it, but they cannot spare the time for the study. Medical students in our school are required to take a certain amount of pharmacy in the college.

Mrs. R. A. White: There is only this feature about it: if you introduce these medical students into all the intricacies of manufacturing our wares, putting up our prescriptions and so forth you will be surely making them dispensing physicians. Physicians should know how to write a correct prescription, but to really give them a course in pharmacy seems to me impossible. This would prepare the way for more dispensing physicians.

Professor H. V. Army: I might say that the question of teaching materia medica in the medical schools has very considerably improved in the last ten years. I recall one case of a man who went to a medical school and found when he got there that they were teaching in the medical school a much better course than they were in the pharmacy school. He found that the pharmaceutical laboratory course provided for more hours than they averaged in the regular college of pharmacy. The man who has charge of the department is an ex-druggist, and he is desirous of bringing about a reform, and the reform is exactly along the line mentioned in this paper by Professor Gathercoal. The object is this: He keeps before the student preparations of the U. S. Pharmacopœia and the National Formulary and the German pharmaceutical preparations. The student starts in with the material itself, and then he has the labeling to do, and the inscription of the label to write, he takes into consideration the writing of the prescriptions, and he is given certain tests,

and is compelled to write prescriptions and they are marked. If all medical schools were handled in that way, by the time the students graduated they would know something about prescription writing.

Mr. W. F. Root. I take it that the paper refers to the application, rather than to the work of a pharmacist. I do not think that the paper refers to the educating of a physician to make preparations but rather to know the ingredients, the materia medica. To my mind, the real doctor is developed from the man who started in as a druggist, who then goes to a college of pharmacy and later to a medical school.

Mr. Phillips: I think that sometimes we try to get too much into the college course. Pharmacists should use their efforts with the young physician when he first begins to practice and help him in his prescription writing, otherwise the detail man will get hold of him and show him the easy way to prescribe so that he becomes lost for a long time. I also think that the bringing together of physicians and pharmacists through the colleges, through the alumni, is really higher education.

MORE ENGLISH FOR THE PHARMACIST.*

CHARLES P. VALENTINE.

The tendency of pharmacy today, is toward the elevation of educational requirements for those who enter it. Many examining boards of pharmacy require that its applicants be graduates from a recognized college of pharmacy; the latter, in turn, are gradually, and wisely, demanding higher entrance requirements, and are lengthening the various courses they maintain. A number of our leading colleges of pharmacy are departments of the larger universities; their students receive collegiate training in chemistry, botany, and biology, along with that in the strictly pharmaceutical subjects, and yet the students in pharmacy are the only university students who are not required to take, nor do they receive, at least the first year's course in college English, during their attendance. If the student in law, in engineering, in commerce and accounting, in chemistry, or in a liberal arts or academic course, is given a course in college English, why should not the student in pharmacy, in the collegiate course, receive the same?

As yet the matter has received but little attention, and less recognition on the part of the schools of pharmacy. The American Conference of Pharmaceutical Faculties, it is true has prescribed a year of high school English for the schools complying with its standards for pharmaceutical educational requirements. Many colleges of pharmacy include college English as a requisite in their three and four years courses in pharmacy. This is, however, at present of little significance, since the great majority of students in pharmacy elect the two year course only.

The value and importance of English to the pharmacist must become apparent upon the analysis of the demands his calling makes upon him. The pharmacist of today is not only the professional man; to be successful he should be an intelligent carefully trained and versatile business man as well. Peculiar then, in that pharmacy combines the advantages as well as the difficulties of both a professional and a business career, it appears that the college of pharmacy

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