TRANSACTIONS OF THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.

Proceedings of the Twenty-eighth Annual Meeting held at Pittsburgh, Pa., September 14, 15 *and* 16, 1915.

The President, CHARLES L. BONIFIELD, M. D., *in the Chair.*

(*Continued.*)

THE TEACHING OF OBSTETRICS.

BY

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TEXT-BOOK titles as "Theory and Practice of Medicine" and "Principles and Practice of Obstetrics," emphasize alike the fact that medicine is both a science and an art. In teaching medicine, however, there is a tendency to minimize the importance of the science and emphasize that of the art. This tendency is both natural and logical for a number of reasons: The teaching of the science is largely in the abstract and has to do with the ideal, with theories, principles and fundamentals; whereas the teaching of the art is almost wholly in the concrete and deals with the application of the science to every-day life in medical matters. Much of the science is abstruse, speculative, of doubtful signification and, in parts, difficult to comprehend in its relationship to the end sought in the study of the subject. The art, on the other hand, has to do with the practical, with things immediately before, and deals largely with that which is possible of accomplishment. The science, while regarded as essential, is all too frequently valued only as a means to an end—to equip for the practice of medicine. As it is the exceptional student only who is fitted by temperament, inclination and equipment for a career in purely scientific medicine, the demand is largely for teaching along practical lines.

The scientist in medicine naturally becomes the teacher and investigator; whereas the artist in medicine, inevitably, becomes the practitioner. It would thus appear that in the teaching of medicine

there is a twofold purpose—the training of teachers and investigators, and of practitioners. This is usually the ultimate result; but if such discrimination is unduly emphasized in undergraduate instruction, it will defeat the object of prime importance in all medical teaching, namely, the training of physicians.

The student, whether he is to spend his life in the laboratory, in teaching or in private practice, must apply the same spirit of scientific inquiry to his work from the beginning to the end of his undergraduate studies. He must be led and inspired to seek truth for its own sake and entirely apart from any consideration as to whether or not it will be of practical value. Building upon such a foundation the physician will be prepared to solve problems for himself in whatever department or field of medicine he may be occupied. Whether as teacher, investigator or practitioner, it makes but little difference. He may even be all three of these with distinguished success; and when he is, he becomes the ideal teacher.

The science and art of medicine may not be separated with advantage in the teaching of the subject. There may, perhaps, be such a thing as a pure scientist in medicine, for no man can practise medicine successfully whose art is not rooted and grounded in the science. Likewise, the teacher and investigator in medicine must know much of the art, and for the teacher of clinical medicine extensive experience in practice is an indispensable qualification.

It is with the above-expressed convictions in regard to medical education in general that I would approach the subject of the teaching of obstetrics. Obstetrics belongs to the so-called clinical branches of medicine and as such, according to prevailing custom, is taught both didactically and clinically. And this brings up at once the relative importance of didactic and clinical teaching in obstetrics. There can be no question but that the more concrete the didactic teaching can be made, and the more intimate its affiliation with the clinical, the more effective will be the teaching and the better, therefore, the results in practice. There are those even who claim that the didactic instruction should be given in conjunction with the clinical and in no other way. At first thought this appears ideal; but the ideal, here as frequently elsewhere in medicine, is impracticable and even impossible of accomplishment. Obstetric cases must be utilized for teaching purposes when available, yet more often than otherwise, they are not available when most needed. From the clinical standpoint, moreover, a case rarely, if ever, covers all phases of the subject so that in order to make the teaching of the subject under consideration complete, didactic teaching must

supplement the clinical. Then, too, since only cases available at the time set for the clinic can be used, a systematic and exhaustive course of lectures covering the entire subject of obstetrics cannot be given clinically unless a varied and unlimited amount of clinical material is available and an amount of time given to the course much beyond that usually assigned to obstetrics in the medical curriculum. From the nature of the subject matter, moreover, there is much of obstetrics which cannot be taught clinically. There are, in addition, a number of obstetric events and conditions which, although suitable for clinical teaching, are so rare and so infrequent in their occurrence that opportunity is seldom given for their observation.

For the reasons given, and for others which might be enumerated, I am of the opinion that didactic teaching in obstetrics cannot be eliminated from the curriculum without great loss to the student. The foundations of obstetrics as a science can be soundly and effectively laid only by a systematic course of didactic instruction in the fundamentals and such other parts of the subject as do not lend themselves to clinical teaching. All didactic instruction, however, should be pictorially or otherwise concretely illustrated and wherever practicable should be emphasized and fixed by laboratory studies and clinical contact through observation, demonstration and practice upon the living subject. If due regard be given to the claims of the other medical subjects in the curriculum, sufficient time cannot be allotted to obstetrics to make possible the training of competent obstetricians by undergraduate instruction alone. On the other hand, undergraduate instruction in obstetrics must be of the kind upon which graduate students not only can but must build while specializing in the subject. In other words, the teaching so far as it goes, must be correct and of the proper spirit. If then obstetrics is to be taught as a science it is inevitable, with the limited time of necessity given to it, that the subject be covered didactically where clinical opportunities are not available and where clinical teaching, from the nature of the subject matter, is not applicable.

As stated, all didactic teaching should be concretely illustrated. This may best be accomplished by the use of models depicting accurately everything in obstetrics possible of reproduction. Such models should include especially the following: the entire subject of embryology as it is known and taught; the obstetric anatomy of the female genitalia and pelvis including all pelvic anomalies; the gross and structural changes which take place in the genitalia, especially the uterus, from the very beginning to the end of preg-

nancy; the changes which take place in the uterus and lower birth canal during labor; the attitudes, positions and presentations of the fetus in utero-normal and abnormal; the successive attitudes which the fetus assumes in passing through the birth canal in the mechanisms of labor in each and every position of the fetus; the gross and structural changes which take place in the uterus during the third stage of labor; the gross and structural anatomy of the placenta including all anomalies and diseased conditions; the effect of labor upon the baby as the molding of the head, the formation and structure of the caput and cephalhematoma, intracranial hemorrhages, fractures, birth palsies and all abnormalities, monstrosities and diseases of the new-born; the changes in the genitalia including the breasts, associated with the puerperium; certain accidents, complications and diseases of pregnancy, labor and the puerperium; the various injuries to the birth canal, their effects and cure; and obstetric operations.

As there is in existence, at the present time, no obstetric teaching museum containing models of the scope and character above indicated, there is likewise in existence no obstetric teaching institution properly equipped for the teaching of obstetrics as it should be taught. As a substitute for such museum or as a supplement to such as may exist, there has been devised nothing equal to opaque and lantern slide projection. I am convinced that at the present time no course in obstetrics may be regarded as complete without the use of some sort of efficient projectoscope in both the didactic and clinical teaching. I am also of the opinion that in the not distant future motion pictures will supplant all other means of pictorial illustration in medicine.

I would not overemphasize the importance of didactic teaching in obstetrics. It is basic and indispensable to the teaching of obstetrics as a science. It must in part precede and in part accompany clinical teaching, but can never take its place, as has too long been attempted. In times past obstetrics was taught very largely didactically and in certain quarters this is still the case. Even at the present time in all but a few medical schools in this country, the clinical teaching and practical experience given undergraduate students in obstetrics are woefully deficient. Both the teaching and practice of obstetrics are generally regarded as the poorest of all the clinical branches of medicine. There must be a reason.

It seems to me that, in the final analysis, the explanation will be found in the fact that from the beginnings of human history childbirth has been regarded as a normal process. In spite of much

proof to the contrary, the idea is so deeply rooted in the mind of the race that its eradication is a very slow, even though a certain, process. In other words, there does not exist a universal or as yet even a popular demand for good obstetrics; and until there is such it is going to be most difficult to improve the quality of the teaching beyond a certain point. Students of medicine will not make extensive preparation for practice in a field of medicine which offers so little in the way of returns as does obstetrics to-day in general practice. It would thus appear that the standard of obstetric teaching is low very largely because the standard of obstetric practice is low. The trouble is not so much that as a profession physicians are unable to do good work in obstetrics. While it is true that there is an appalling amount of ignorance among medical men in obstetric practice, it is likewise true that there is much carelessness and indifference on the part of those who know better. All too frequently, however, both patient and physician are ignorant of the importance and possibilities of good obstetrics with the result that the physician does not acquire knowledge which he deems unnecessary or feels he will not use, and the patient for analogous reasons does not demand what the physician really cannot give and refuses to pay for what she does not receive. The result is that obstetrics in the hands of otherwise competent physicians is not well done, very largely for the reason that it is impossible to give the necessary time and effort for the compensation obtainable. It has thus come about that among the poor the work is left largely to midwives or is done by physicians who under the circumstances have not been able to give even the minimum amount of time to it. The midwife is thus generally regarded as a necessity, even though a very poor makeshift, and the physicians who do the work among the poor, of necessity do it poorly and are not very much to blame. Even among patients able to pay for competent service, such service is frequently not given because not appreciated and not demanded. Even when well done it is difficult to obtain adequate compensation. As a result the average general practitioner has come to dislike the work, puts as little time as possible upon it and asks in the way of compensation just what he feels he can get.

I believe that the question of good obstetrics ultimately will be solved through the education of the lay public and in no other way. Just as soon as the people fully appreciate the importance and possibilities of good obstetrics, much will have been accomplished toward the solution of the problem. It will be for the medical profession, however, to point the way for the proper training of obstetric prac-

titioners and to educate the public very largely through results in practice, but the people themselves must be brought to the point where they will demand good service and provide ways and means for proper compensation.

It is my firm conviction, however, that any scheme for improvement in obstetric teaching and practice which does not contemplate the ultimate elimination of the midwife will not succeed. I say this not alone because midwives can never be taught to practise obstetrics successfully, but most especially because of the moral effect upon obstetric standards. The lay public will continue to regard with indifference all pleas for improvement in the teaching and practice of obstetrics so long as more than 50 per cent. of confinements are in the hands of ignorant, nonmedical individuals, who, as a class, are regarded as capable of doing the work satisfactorily even by physicians, among whom are certain well-known professors of obstetrics.

There is now on foot, in New York City, and elsewhere a movement to train and license midwives. This movement is doomed to ultimate failure because founded upon a great social injustice, upon a double standard of obstetric practice and upon a wrong conception of what the lay public will sooner or later demand. The midwife can never be taught to practise obstetrics acceptably in the light of modern obstetric ideals. The rapidly growing movement now in progress to secure competent obstetric service for those unable to pay for it, will sooner or later make the midwife obsolete and her elimination inevitable.

The teaching of the clinical or practical side of obstetrics can be accomplished satisfactorily only through the medium of suitably equipped and properly conducted hospitals and dispensaries. Such hospitals and dispensaries should be teaching and research institutions in the fullest and broadest sense of the terms, with a large amount of obstetric material freely and constantly available for the purpose. The teaching staff, and there should be no other, should consist of full-time workers only, who should be paid salaries sufficiently large to make them independent of all other work. This condition of affairs is essential if the teaching is to be maintained at its maximum efficiency and the obstetric material fully utilized as it presents itself. When we speak of clinical teaching in obstetrics we do not refer alone to formal clinical lectures given in an amphitheater, before a score or a hundred students, so many hours a week. On such occasions only cases available at the time can be used so that but a very small part of the clinical teaching can be

given in this way, even though well given and most valuable when it occurs. Since labors occur during all hours, both day and night, at irregular, uncertain and unexpected times, obstetric teaching, from the clinical side, must, necessarily, be a continuous performance irrespective of eating, sleeping, resting, recreation or study. Each labor case must be utilized to the fullest to teach and to study all that it offers. This is imperative not only that the student may have the largest possible opportunity during the limited period assigned to him for practical work, but, also, because by using each and every case as a teaching case, the complications and unusual things are thereby most certainly discovered and utilized to the great advantage of both teacher and student to say nothing of the incalculable benefit to the patient.

The conduct of labor cases is, at best, both time and strength-consuming, but when earnest and conscientious teaching is added thereto, the tax upon the teacher becomes severe, especially when continued over a period of months or even years. For this reason, the teaching staff should be sufficiently large to permit of frequent changes and these should be comparatively short hours, if the best results are to be accomplished.

As previously stated, competent obstetricians cannot be trained by undergraduate instruction alone. On the other hand, much more can and should be done for undergraduate students in obstetrics than has as yet been done in this country. I am fully aware that the four years of undergraduate instruction in medical schools is already so fully occupied that not much more time can be diverted from other subjects for obstetrics. With a system of intensive teaching as above outlined, much more can be given the student, however, than he now receives.

For practical instruction in obstetrics, the student should utilize at least a part of the summer vacation immediately preceding his last school year. If this is not possible, because of limited material or a relatively large number of students, several weeks of the school year should be given to the work, during which time the student should reside in the hospital and be excused from all other school work. During this time he should be given ample opportunity for the examination of pregnant women including vaginal examinations, abdominal palpation, auscultation and pelvimetry. He should follow case after case through labor from beginning to end, always under the most careful supervision and instruction of trained teachers. He should not only be allowed to observe deliveries, but should conduct them as well under supervision and instruction. Oppor-

tunity should be given also for repeated vaginal examinations on parturient women—each case of labor being used to the fullest extent for teaching and practice—with due regard, however, for the strictest asepsis.

The student should follow most carefully the puerperal convalescence of every patient in the hospital at the time of his service, especially those whose deliveries he has witnessed or conducted. The care of the babies should form an important part of the hospital instruction. Bathing, care of the eyes, the giving of enemata, the doing of retractions or circumcisions, inspection of the stools and the modification of cows' milk for infant feeding, should all come in for consideration in the most practical manner. At the close of his hospital service the student should enter the dispensary service, where under close supervision he should be required to care for pregnant, parturient and puerperal women, following the technic, as far as may be practicable, which he has learned in the hospital. Before graduating each student should be required to deliver, under supervision and instruction, at least twenty-five women; and, before going into private practice, he should be required by law to do upon the living subject the obstetric operations which his license gives him permission to perform. This opportunity can readily be supplied in a service of from three months to a year in maternity hospital and dispensary services such as I have attempted to describe.

I shall close with a brief reference to graduate instruction in obstetrics. In order to become a thoroughly trained obstetrician, the graduate student must spend a number of years as assistant and teacher in a maternity hospital and dispensary services of the type already described. The major part of undergraduate instruction should be given by graduate students for this very purpose. The teaching helps them immeasurably. It gives them assurance, makes them alert, teaches them the invaluable art of expression, develops clean cut ideas and thorough methods and accurate clean-cut procedure.

Laboratory studies and research should constitute an indispensable part of all graduate study in obstetrics, not alone for the knowledge which the student acquires and what he adds to the knowledge of the subject, but more especially because of the habit of investigation acquired thereby; all of which will make his research work of the future more fruitful. Aye, more than that, it will prevent him from degenerating into a mere merchant.

FORBES AND HALKET STREETS.

DISCUSSION.

THE PRESIDENT.—This is one of the most important papers that has been read before the Association. The men who are being taught obstetrics to-day are the men who will be sitting on these seats occupying the places we are now occupying one-quarter of a century hence. This paper is exceedingly interesting and important, and I hope there will be a free discussion of it.

DR. HENRY SCHWARZ, St. Louis, Missouri.—We all subscribe to the importance of Dr. Ziegler's paper on the importance of teaching obstetrics. The picture he has painted is the desirable one to be attained, and I am sure we all feel more or less that way. We do not subscribe, however, to all that he has said. For instance, I do not subscribe to the statement that there is no place where obstetrics is being taught thoroughly; that there is no place that has the teaching facilities or system such as he has pointed out. We know that there are some such places, but they are very few and far between.

Dr. Ziegler's paper has disappointed me in this respect, that he has not pointed out the true cause why obstetrics in this country is not taught as it should be. The cause is not in the public; the cause, as he correctly said, is in us. The cause is in the medical schools. Those who are connected with Harvard Medical College, the Johns Hopkins and other leading schools, where they have a professor on surgery, a professor on medicine, or a professor of pathology, could get anything in their community they want, and such men could put obstetrics on a proper footing if they had it in mind or if they had been properly advised. The cause of it to my mind is that obstetrics is circumscribed by not giving to the obstetrician all that belongs to his department.

Dr. Ziegler has painfully abstained from mentioning anything about the diseases of women or about the diseases peculiar to women. He has their welfare at heart, and his institution is to be a woman's clinic in the true sense of the word. We want a woman's clinic. We want our birthright. We want to be obstetricians. An obstetrician does not mean a puller of babies; it means that a man stands by a woman during all the hours that are peculiarly important to her; it means from the cradle to the grave, and we do claim that the teaching and development of obstetrics is stunted when you separate obstetrics from that which the good obstetrician tries to prevent, namely, 50 per cent. of the entire field, and that is gynecology. There is not in a true woman's clinic any thought of dividing obstetrics and gynecology, but when you form associations like this, where you have surgeons and gynecologists and obstetricians, and where three are one and the same thing, you yourselves are instrumental in keeping obstetrics on a lower level. The gynecologists as they like to call themselves, are neither fish nor meat. The gynecologist is the one who causes all trouble in medical schools. He is an abomination to the surgeon. The surgeon would like to attack him as a subdepartment of surgery. He is an abomination likewise to the obstetrician because he interferes with the full development of

the obstetrician. You cannot develop an obstetrician such as Dr. Ziegler has in mind unless you give him a full field of activity. If a society such as this would come to a realization of the important service that should be given to the community, by learning to understand this point and by trying to enforce in the medical schools with which we are all more or less connected, a great step would be done to accomplish the ends which are in the mind of Dr. Ziegler. Whenever institutions start out to do things they go to the best brains of the country. Let us take Washington University Medical School of St. Louis as an example. They go to Welch of Baltimore; they go to the Carnegie Foundation; they go to the Rockefeller Institute, they go to Boston, and then they come home and say we must have full-term teachers in medicine, surgery and pediatrics, etc. That is what they did in St. Louis. Luckily, we would not stand for it, but we had to hammer into the new faculty that there are only three main clinical divisions of medicine, and these are medicine, obstetrics and surgery. Obstetrics first, because you train these men, and when you turn them loose on the public you expect them to do good obstetric work. There is nothing in surgery that the young graduate cannot escape if he wants to, outside of fractures and dislocations and a few of the minor surgical operations which every good graduate can perform. But he does not have to remove the Gasserian ganglion or do gall-stone operations or things of that kind, because there are plenty of experienced surgeons for him to consult at all times and in all places. But in obstetrics the youngest graduate may be called upon to go to a farm several miles away from medical assistance and there he has to do what the case calls for whether it be a case of eclamptic convulsions, a case of contracted pelvis, or a neglected shoulder presentation, or what not, so that there is nothing in the text-books on obstetrics that we can neglect in the teaching. We have to prepare them then in every detail of obstetrics before we can safely turn them loose upon the public. In our school, I am happy to say, we are overcoming the ambition of the surgeon, for instance. Professor Murphy, a very dear freind of mine, came from Harvard to build up the department of surgery in our institution. He understood he was to do all the abdominal operations, to take out fibroids, etc., because that was the way he was brought up. We argued the point a little while, and in arguing we have for years found that we must never get too hot; we must use persuasion and never get ourselves into a place where we say, "Unless you do this, we quit." We do not do that. We fight this way: "Unless you do that which is for the best interest of the institution, we will fight and keep fighting because we will give you no rest unless you do that for which we have stood a lifetime." If the three branches were accorded equal weight in the teaching, equal weight in the passing or not passing of the students, there would be no trouble in making students take the necessary interest in obstetrics. In the first place, they really like to be taught well. They enjoy the work, but you can flunk them just as quick in obstetrics as in medicine or surgery so that we have no difficulty that way.

As our friend Dr. Williams says, there is good work done here and there in teaching obstetrics, only it is not done as a rule. They have to do it under difficulties and fights which should not be imposed upon them. There is too much struggle and fighting necessary to insure the safe development of obstetrics.

I do not like to go much further into these things except to say this: It has been an abomination to me, when I come to some of the meetings of our Association to find a program filled with subjects that are absolutely foreign to obstetrics in itself, even including the operative procedures peculiar to women. When I read the By-Laws of the Association I find that our Association is devoted to the advancement of obstetrics, to gynecology and abdominal surgery. With the good obstetricians increasing in number in the Association, with the pathetic talk we got last night from Findley, of Omaha, and from Ziegler with reference to obstetrics, it may not be long before we will try to change the Constitution and By-Laws, before we will try to cut off abdominal surgery, before we will try to make an association for the advancement of obstetrics and gynecology. That includes all legitimate abdominal surgery that the obstetrician ought to do. We do not want to stir up too much feeling, but at Indianapolis next year we will make a motion in proper form, let it lie over for a year, and then we will exert ourselves to make this Association stand for obstetrics in its extended sense, including gynecology.

Dr. Greer Baughman, Richmond, Virginia.—I have been very much interested in Dr. Ziegler's plan of teaching obstetrics, I think it is ideal, and hope he will be able to carry it out.

I want to say a word or two in regard to the point of eliminating midwives and in advancing the teaching of obstetrics. The situation in regard to the midwife is fast changing, particularly in our section of the country. There is a reason for it, and I believe the same thing can be carried out with you in your towns or cities. Our outside dispensary in obstetrics takes charge of this work. I do not believe it is possible to do away with the midwife under the old method of allowing students to deliver women without competent instructors. There are many women who prefer a midwife they know to a young medical student they do not know. Every case on the outside is demonstrated by a demonstrator. This is troublesome and it requires nine or ten men who are interested in the work, but who do not receive one penny. They do this for what they can learn in teaching students on the outside. It is astonishing the improvement that has taken place in the outside service, and how midwives are being eliminated because we are trying to do the work in that way.

My idea in teaching clinical obstetrics is that absolutely every case should be demonstrated. Ten cases perfectly demonstrated by an intelligent demonstrator are equal to a hundred cases that the student does himself, without instruction.

We have instituted one plan of instruction which is a small thing, but it is the small things that help, and possibly it may not have oc-

curred to you. We have at regular intervals clinical history talks with our boys. We read to a certain point, histories of cases that have occurred in the service including the size of the pelvis, the heart sounds, etc. We tell the student to write down what was done to the woman and what was the result, and after we have collected the answers, we read what really happened to her. Leopold, of Dresden, I believe suggested this plan of instructions and carried it out in a splendid way.

DR. JOHN NORVAL BELL, Detroit, Michigan.—A course in obstetrics given to students by these instructors by actual demonstration of patients is ideal, but no matter how many of these nonpaid instructors there are, there will be a time when none of these men are available. That happens very frequently. In our institution we have four men in our department who are available for demonstration in the homes of patients, but it frequently happens that not one of these men is available when the student calls up. On the other hand, many of these women deliver themselves precipitately, and the student receives no benefit from the case at all. To my way of thinking, all of these cases should be delivered in an institution, such as Dr. Ziegler has for this purpose, where you can teach obstetrics and teach it properly. You can get patients to come in there as soon as their pains develop, and you can demonstrate these cases in the institution. There a doctor is usually available very quickly, and if not, his first assistant, who is resident in the hospital as senior intern in his department, is available, and he can give a scientific demonstration of delivery. In our institution we have the fundamental principles of obstetrics taught in the junior year in the outdoor department. Patients come there and register, and the students are divided into sections. They are taught pelvimetry and external palpation, the location of the fetal heart, and they are taught by the attending staff of the outdoor department. They see a lot of good material and receive excellent instruction in this way. In the senior year they go to the hospital and have the cases demonstrated to them there at the time of delivery. When they go to attend a case in the hospital the outdoor history is brought in, they sit down and look it over, they examine the patient, and go ahead with the delivery, and the students are required to make out a preliminary history of that patient themselves and the history at the time of labor, and required to follow the case up for the first ten or twelve days, to see the patient every day for ten or twelve days after the child is delivered. That, at the present time, is as near ideal as you can get it; but there is not the slightest doubt that the teaching that Dr. Ziegler has outlined is even more ideal, but it is not practical. We are facing a condition and not a theory. I heartily agree with Dr. Schwarz. I did a lot of gynecological work for fifteen years and am still doing it, for in order to be a good obstetrician you must have had a good grounding in gynecology. In other words, to be a good obstetric surgeon, you must have a good knowledge of gynecology. A great many gynecologists so-called are general surgeons and do not know very much about obstetrics. There are a few of

us getting into it, but there would be a whole lot more coming into it if the subject was properly taught and more thoroughly understood. Gynecology is a good ground work for the making of a good obstetric surgeon.

DR. GORDON K. DICKINSON, Jersey City, New Jersey.—I love Dr. Schwarz, but I dislike to think that I have to be a good obstetrician as well as an abdominal surgeon, because I am an abdominal surgeon mostly. I feel pretty warm over one thing which correlates the ideas set forth in the paper. You men who have talked so far do not seem to have many worries, but we men with our type of hospitals have great worry over the matter of how to get the next intern. When 90 per cent., I believe, of the graduate doctors go into hospitals, morally you have an obligation. You men who are connected with medical colleges and are teaching these young men until they graduate and are ready to accept hospital positions, should see to it that certain hospitals are standardized and graded and are universities of instruction. When these young men leave your institution of learning, you should see to it that they get into the proper places to receive proper training and instruction. The biggest part of the literature in our medical journals deals with therapy. We do not often come down to principles. These young men must be taught principles because it is only by knowing the principles of medicine you can think. The boy who cannot think but only work with his fingers is like a carpenter, he will not do for a practitioner of medicine. It is human nature to whittle a stick or to whistle or to do something, but some men do more work with their brains than with their fingers. Hospitals can be made educative centers. We want more interns. I find it hard to get one, although we have a good hospital. You men who have college connections should have an intelligence office and have us on the list and say to each hospital, don't worry, we have had you slated for three years, and we will keep you slated as long as you deliver the goods to the young men.

DR. JAMES E. KING, Buffalo, New York.—I have not been engaged in obstetric work for the last two or three years, nevertheless, I am very much interested in the subject of this paper, and I think that we must all recognize the deficiencies in teaching which Dr. Ziegler has pointed out.

There are two points I wish to emphasize, and the first is in regard to the teaching of obstetrics. It appears to me that too much emphasis is laid upon actual delivery. We instruct the student in how to deliver a case most carefully, and much of the emphasis in the teaching is laid upon this particular part of obstetrics. We show him how to apply forceps on the manikin and on the living subject, and after his graduation we find him applying forceps frequently and not always with good judgment and skill. Much greater emphasis in teaching of obstetrics, I believe should be laid upon the diagnosis of position both before labor has begun and during its progress. In this way, the diagnosis of dystocias and the various abnormal conditions that may be present or arise during labor,

can be detected early enough to be corrected. Until this is done, I feel that we are not going to have painstaking obstetrics among the general practitioners.

The second point is with regard to the midwife, and unfortunately I did not hear all that Dr. Ziegler said on that question. At the last meeting of the New York State Medical Association, we had three very illuminating papers upon the subject of the midwife. It was perfectly astonishing to hear in the discussion the various views expressed by some of the men as to the necessity and need for midwives. I do not believe that obstetrics will have its proper place in medicine, until the public are educated to the view that no branch of obstetrics should be in the hands of ignorant women. I, for one, believe that there is absolutely no excuse for the midwife. She is an importation brought over with the various foreign population that we have in this country; but why we in this country should feel that we must accept her just because she is an institution in Europe, is beyond my comprehension. The midwife problem is one of considerable scope, and apparently there is difficulty in finding a remedy. It would seem that it would be perfectly proper for an association of this character to place itself on record as being absolutely opposed to the midwife, and I think it would be perfectly proper to enter upon our minutes a firm protest against that very unscientific institution.

Dr. CHARLES L. BONIFIELD, Cincinnati, Ohio.—I cannot refrain from making a few remarks on this very important subject. In the first place, I want to commend the paper read by Dr. Ziegler. In the second place, I wish for just a minute or two to defend the association of which at the present time I happen to be the head. Because my friend Dr. Schwarz thinks gynecology should be the appendage of obstetrics is to me no reason why intelligent men should not at the same meeting read papers on more diverse subjects than those conditions that are incident to childbearing. I believe in specialization of medicine. I believe any one who wishes to devote himself exclusively to the surgery of the umbilicus should do so. On the other hand, I do not expect to find any man or set of men who will claim that because it is better to subdivide medicine in a certain way, for the purpose of teaching it, that it is necessary for a man to select one of these arbitrary subdivisions for his practice, or that he must keep his interests confined to that special subject.

Dr. Carstens, one of our old wheel horses, told me yesterday that he spent four hours every day in reading medicine. I know that in reading medicine he did not mean only obstetrics or gynecology, but he reads surgery, internal medicine, and everything else. If it is a good thing for us to read up on these subjects in the privacy of our rooms, it is just as good to hear these subjects discussed at a meeting like this. I believe in this association keeping up its broad field of abdominal surgery, gynecology and obstetrics, or if it pleases our friend better, I am perfectly willing to put them in the order he mentioned, namely, obstetrics, gynecology and abdominal surgery. (Laughter.)

I do not attach much importance to a name, but I really see no great reason for changing that of the gynecologist. The word gynecology means a treatise on woman, the word obstetrics means to stand around. Possibly the reason why gynecology to-day slightly overshadows obstetrics is because the obstetricians have been content to stand around while the gynecologists were making rapid strides forward.

DR. J. HENRY CARSTENS, Detroit, Michigan.—It seems to me, this is a complicated question, and after having passed through all the different stages during an experience of about twenty years in each line, I look at the subject a little differently from some of my friends. I taught obstetrics for twenty years, and then gynecology for twenty years, and now I am teaching abdominal surgery. There are several points to be considered about it. First, into this country there came in the last century in the fifth decade the Irish and in the eighth decade came the Germans who were used to having midwives, and in the course of time these women bore children, and subsequently their children bore other children and we have educated them to employ doctors. Then came into this country the Poles, we have educated them, but later came the Armenians, and other nationalities, and they are used to midwives. Most of those people came to this country poor, they have not money to engage a doctor, they cannot pay a doctor what he ought to have for his services, and the result is they take midwives. But by and by these people will also be educated to employ doctors in cases of obstetrics and will have them all the time. But for the reasons I have mentioned it will not be an easy matter to get rid of the midwives, but I believe with Dr. Ziegler that we ought to get rid of them as soon as possible. Who are the obstetricians in the country to-day? Not you and I. No. The obstetricians in the country to-day are the general practitioners. They are the ones, and to have these obstetrical papers read before us does not do any good. These papers ought to be read before a society of general practitioners, before the internal medicine man. They ought to be thoroughly drilled in obstetrics, and so I agree with Dr. Ziegler we ought to drill into our medical students a thorough knowledge of obstetrics. We should educate them to take an interest in it, but what is the result? Students will learn it, we give them good instruction, and plenty of cases to handle, they know all about it, and they go out and practise it. If they practise in the country they have got to do obstetrics, and they do it. If they practise in a city what do they do? They do not practise obstetrics very long. They want to be specialists of some kind. Obstetrics is hard work, and it does not pay very well. I practised obstetrics for twenty years, and I know it is hard work. I have delivered as many as 200 women a year, and every one here knows to deliver 200 women in private practice, besides attending to other duties, means that you are called out every night, and I do not care what kind of a constitution you may have, there is a time coming when you cannot do that work any more. You cannot keep it up forever unless you limit yourself to a few dozen cases, and that

does not do any good to the community. You must understand that many of us are getting older, we are getting tired of obstetrics, and we drift into other surgical work. There are many men who do not practise obstetrics, while others do. It occurs to me whether it would not be a good idea to have a large obstetricial society in this country for men who could and would devote themselves especially to obstetrics and would have a society for themselves where they could discuss this. I do not know that the time is ripe for that. Personally, I take as much interest in the obstetrical papers as I do in the gynecological or those on abdominal surgery, and I think the obstetricians should be able to stand a few papers on abdominal surgery and gynecology.

DR. ZIEGLER (closing the discussion).—If I had been given an hour or even two hours to discuss this subject, I could have expressed my view more fully and doubtless more accurately. I fully agree with all that Dr. Schwarz has said but in twenty minutes it was hardly to be expected that I would cover fully the subject which I have brought before you. I do not teach gynecology in the University and therefore have not discussed it in my paper. In the New Magee Hospital, however, we will practise both obstetrics and gynecology and will teach them both to post-graduate students even though we teach obstetrics only to under-graduate students. The Pittsburgh members of our association will testify to the vigor and persistence with which I have advocated the inseparable combination of obstetrics and gynecology. I have met with so little support and with so much opposition that after a time the contention has grown monotonous and so I have purposely confined my paper to the teaching of obstetrics. For this very reason I am especially pleased to have Dr. Schwarz criticise my omission.

If Dr. Schwarz will read my paper carefully he will agree that I did not say that there are no institutions in this country where obstetrics is taught as I have advocated. I admitted that there are a few and of course Dr. Schwarz's institution was included in this number.

Personally I feel very strongly on this subject. I think we are all of the opinion that a certain amount of didactic teaching is indispensable. When it comes to the practical side of obstetrics, there are but few institutions, even now, giving the students what they should have. In most obstetric-teaching institutions the students witness deliveries only. They are advised what to do, but in very few institutions do they actually conduct confinements under supervision and instruction. We learn to do by doing and in no other way and unless our students actually do the work they will go out into practice with little more knowledge of the subject than if the teaching were entirely didactic. In our work at the hospital three students are on duty at a time. Each student gives the anesthetics for four cases during the close of the second stage; as second assistant, he counts the fetal heart sounds, observes the character, duration and frequency of the pains and controls the fundus and uterine contractions during and following the third stage of labor for four cases; and as senior assistant, he assists with

the ninth case and finally delivers under supervision and instruction, the tenth, eleventh and twelfth cases in his service. At the close of his service in the hospital the student is sent into the out-patient service where he conducts four more cases under supervision and instruction. He is thus present at a minimum of sixteen cases of labor, seven of which he has personally conducted under instruction and supervision. If his work has been satisfactory he is then permitted to conduct alone and upon his own responsibility as many additional cases as he has the time and inclination for.

In spite of what Dr. Schwarz has said, I still think that the responsibility for poor obstetrics rests very largely with the people. They do not have the respect for obstetrics that they should have. Midwives are doing a large part of the work. The people naturally feel that if midwives can do the work satisfactorily, little medical education is necessary. I believe that the midwives may be supplanted by maternity dispensaries. The trouble is that the profession is not united on this subject. Many physicians profess to believe that midwives can do the work satisfactorily and are indispensable. Others believe, as I do, that we can get along without them. So long as the profession is not agreed upon the matter, the people will not give money to eliminate the midwife. On the other hand, money will be promptly forthcoming just as soon as the people are convinced of the necessity of physicians and nurses doing the work. In three and a half years, I have collected and spent almost $50,000, in maternity dispensary work and I have done it alone and without a particle of assistance from a single physician in the city. We have four physicians, five nurses and a social worker on our dispensary staff. They are on salaries and devote their entire time to the work. We expect to secure pledges of $20,000 a year for the next five years to carry on the work which is growing rapidly. We are now caring for about a hundred confinements a month and making over a thousand visits a month in the homes. I know what I am talking about when I say that if the physicians of the city were agreed that the midwives should be supplanted by physicians and nurses, the thing would be accomplished in less than a year and there would be no trouble in getting the money.