THE TRAINING IN OBSTETRICS THAT THE STATE SHOULD DEMAND BEFORE LICENSING A PHYSICIAN TO PRACTICE.*

BY

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As good an index as any other, of the civilization of a state, is its law to protect women in childbirth from harm at the hands of untrained physicians.

Wherever the human race has reached its highest development, these laws are intelligently framed, well administered and efficient in attaining their purpose. Descending the scale of civilization they show decreasing knowledge and wisdom until they disappear altogether. Judged by this standard, the United States does not rank high among civilized nations. As might be expected the level of civilization by this test varies in the different States. Some are lower than others, but in none is anything like the same intelligent care taken of that part of the community which most needs protection, as is exercised, for example, in Great Britain, Germany or France.

* Read before the Obstetrical Society of Philadelphia, March 2, 1916.

In many States and Territories, nothing is required but a theoretical examination—the written answers to ten questions—for which an applicant might cram with a quiz compend overnight, and might then be launched on the community with the State's license to attend women in childbirth, although he may never have seen a woman in labor and is grossly incompetent to deal with even a minor complication.

Besides consulting the last edition of the pamphlet on this subject,

No requirements except a theoretical examination	Class A and B schools of C on M.E.A.M.A., but no specific requirements as to cases on roster	Requires the standard of the Asso. Amer. Med. College
Illinois	Alabama	Arizona
West Virginia	Vermont	Maryland
New York	South Carolina	Oklahoma
Minnesota	Florida	Philippine Islands
Massachusetts (not even a degree)	Wisconsin	Washington
New Hampshire	Colorado	
Georgia	Kentucky	
North Carolina		
Montana		
Utah		
Oregon		
New Mexico (nothing but a medical degree from Class A and B schools) not even a theoretical examination.		
Arkansas		
District of Columbia		
Hawaii, Idaho, Indiana		
Kansas, Maine, Mississippi		
Nebraska, Alaska, Nevada		
North Dakota, Porto Rico, South Dakota		
Tennessee, Wyoming.		

Requires a specific number of cases but no specifications as to roster	A specific number of cases and a certain number of hours on the roster
Ohio, 5 cases.	Virginia: 10 cases; 128 hours in third year, 64 hours in fourth.
Rhode Island, 10 cases and one year's internes-hip in a hospital.	Delaware, 6 cases; 180 hours.
Pennsylvania, 12 cases, 6 in undergraduate school, 6 in hospital year.	Connecticut, 6 cases; 195 hours.
	Louisiana, 6 cases; 180 hours.
	Missouri, 5 cases; 160 hours of which 60 are clinical.
	Texas, 6 cases, 120 hours of lectures.
	California, 165 hours on roster and 6 cases.
	Iowa, 3 cases; 160 hours.
	Michigan, 6 cases; 160 hours on roster.

New Jersey has no specific requirements but medical school must be registered as first class by the Board of Licensure.

published by the A. M. A., I have written to the secretaries of the Boards of Licensure of all the States and Territories of the Union and to the Secretaries of the Council on Medical Education of the A. M. A. and of the association of American Medical Colleges. The result of this inquiry is appended on the preceding page.

The Council on Medical Education "recommends" 180 hours on the roster for obstetrics exclusive of time of attendance on six labor cases. The association of American Medical Colleges requires witnessing twelve cases, and personally conducting three, before, during and after labor, under supervision.

If the general public could see what goes on in any one of the large obstetrical clinics of this country; women admitted with ruptured uterus; with their intestines hanging out of the vagina so that if they could walk, they might trip over them like a gored horse in a Spanish bull fight; exsanguinated from a neglected placenta previa or an overlooked ectopic pregnancy; infants torn limb from limb; their heads pulled off and left in the uterus; forceps forced on the lower uterine segment till their tips penetrate the vaginal vault; and so on, through a catalogue of horrors; if, I say, the public knew the facts, the boards of licensure throughout the country would be forced to do the duty for which they were appointed by the State.

There are some exceptions to the disgraceful negligence of many states as may be seen in the appended list of State requirements, but even the best of these requirements is inadequate, judged by international standards. Our very highest demands would not qualify a man to practise in the most civilized countries of the world.

Is there any good reason why our women should be afforded less protection than is considered necessary in other countries? But it is not our purpose, this evening, to criticise the rest of the United States, however much we may deplore the semibarbaric laws of many states in our common country. Our concern is with Pennsylvania. It is gratifying that in some respects we have enacted a more enlightened legislation on this subject than any other State. It is particularly a source of pride to the Philadelphia Obstetrical Society that we owe our advanced position in this matter to a board of licensure whose president is our ex-president, fellow-member and old friend, Dr. John M. Baldy. I, for one, have followed his intelligent, self-sacrificing and progressive efforts to raise the standard of medical education and practice in the State of Pennsylvania with the greatest interest and the warmest sympathy. Knowing as we

do from what has already been accomplished, that he and his board are determined to afford the citizens of Pennsylvania adequate protection from ill-trained physicians and incidentally to improve the teaching and practice of medicine in the State, I felt sure, when this meeting was organized, that he and any other member of the Board who cared to attend, would welcome an interchange of views with the teachers of obstetrics in the medical schools of the State; all of whom are present to-night.

If I were a member of a Board of Licensure, the duty of my position that would weigh heaviest on my mind would be the protection of the child-bearing woman from mutilation, disability and death, due to incompetent medical attendance. If I could without a catch in my throat, but I never can, I would quote the magnificient peroration of Oliver Wendell Holmes on what is due the woman about to become a mother. Besides it would be a banality to quote what we all remember so well. With the words of Holmes still ringing in our ears as though they had just been spoken and animated by the sentiment that inspired them let us see if it is not possible and practicable still further to improve our law regulating the amount of practical training in obstetrics necessary to qualify a physician to enter upon the practice of his profession.

In an investigation of the medical student's education in obstetrics in America and Europe, undertaken for the American Gynecological Society, followed by a personal inspection of the German, French and British schools, I was particularly impressed with what has been done recently in France as a model for our consideration. In that country, the governmental requirements for a physician's license to practise, until a few years ago, were about as archaic, provincial and inadequate as ours are to-day. Owing to the intelligent interest in the subject aroused by the efforts, I believe, of Professor Bar and some of his colleagues in Paris, a notable reform was effected. The present law requires four months daily attendance for three hours a day on a clinic; sixteen days residence in the hospital and a personal conduct of the delivery of at least twelve women. This regulation takes into account an important educational feature either ignored by our laws entirely, or in a few instances insufficiently provided for. I refer to the uninterrupted attendance on clinical demonstrations for a period of time; in France, four months. This is only a third of the time required by the German and Swiss schools, but it is enough in a large maternity to insure the demonstration of most of the complications and the pathological consequences of the process of generation. The mere attendance on five or six labors or on ten

as in Virginia and Rhode Island or even twelve as in Pennsylvania, insures nothing more than the training of a midwife. The chances are in favor of all this small number being perfectly normal, so that as far as the State knows, the physician might enter practice without ever seeing forceps applied, version performed, the evacuation of a uterus after abortion, not to mention such complications as eclampsia, obstructed labor, postpartum hemorrhage, placenta previa, premature separation of the placenta, ruptured uterus, or other injuries of the genital canal; and without having witnessed the pelvic and abdominal operations required for the complications and pathological consequences of childbirth, immediate and remote.

This is one of the criticisms I would make of our present State law, in which it is as defective as the law of any State and is inferior to some of them. Michigan, Virginia and Missouri, for example, expressly stipulate that a medical school must have given sixty hours of clinical instruction in obstetrics, an absurdly insufficient time, contrasted with the four months or, in our way of expressing it, the 360 hours in France, but better than nothing.

In this connection let me enter my protest against our custom of chopping the medical curriculum up into hours like that of a primary school, based on our antiquated system of the hourly lecture and to express the hope that a reform in this particular may be brought about by a wider knowledge of medical pedagogics. All clinical teachers will agree with me that a three-hour period is necessary for an adequate clinical demonstration: expressed in these terms the highest demands of any of our States is for a three weeks' course in clinical obstetrics! Exposed in all its nakedness by this method of expression, is it strange that our medical degrees and licenses to practise are regarded with contempt abroad?

Another thing I would criticise in our State law is the requirement that the applicant for a medical license must have half his practical obstetrical training in his hospital year after leaving the medical school. What educational advantage can this arrangement possibly secure? Its disadvantages are obvious. According to this law, the majority of our medical graduates will get half of their practical training in a hospital with a few beds set aside for child-bearing women and in a service conducted by someone of necessarily limited experience. I have recently come across two instances of what might be expected from this plan. I heard the chief of such a service dogmatically describe a grotesquely incorrect treatment of one of the rarer accidents of childbirth based on an experience with a single case and in another instance was told of a

fatal hemorrhage in one of our smaller hospitals that could easily have been prevented by proper management. Take the average of the small maternities throughout the State with a service each of about 100 cases a year. It takes more than 300 normal cases to furnish one of postpartum hemorrhage, eclampsia or adherent placenta; 1200, one of placenta previa; 2000, one of premature separation; 4000, one of ruptured uterus, so that three years might be required in such a hospital to demonstrate the treatment of postpartum hemorrhage, adherent placenta or eclampsia, twelve years that of placenta previa, twenty years that of premature separation and forty years to give a single experience with ruptured uterus.

The medical and surgical services of these small hospitals are quite different; every case admitted is a disease entity, conveying its lesson and conferring experience in diagnosis and treatment.

Would not the result that it is the duty of the State to obtain, be better reached, as in the rest of the civilized world, by fostering the accumulation of the largest possible amount of clinical material in the maternities of our medical schools and by insisting upon an amount of time devoted to instruction that would insure a practical knowledge of the best methods of dealing with all possible complications and sequels of labor. Our plan of diffusing clinical material in driblets all over the State and then compelling our medical students to obtain a part of their education in institutions that cannot possibly give it in an adequate manner, would be condemned, I think, by any expert in medical pedagogics.

No one should indulge in destructive criticism without having something constructive to offer in place of what he condemns.

Of the medical schools of the State, two at least are prepared to give an education in practical obstetrics including gyneology that would bear criticism by international standards, the University of Pennsylvania and the University of Pittsburgh. Take the former of which I can speak advisedly. The course consists of sixty-four didactic lectures, thirty-two hours of clinical conference, sixty hours of clinical and operative demonstrations with individual instruction; ten days residence in the hospital; ten days' residence in the out-patient department,* with the privilege of two to three weeks' voluntary residence each in hospital and out-patient department; attendance on an average of twenty cases besides individual drill in mannikin work, cystoscopy, palpation, pelvimetry, history taking, etc. No student can leave the school without seeing numerous examples of complications and their treatment.

* With an average of ten cases personally attended.

Pittsburgh, I know, is equipped to offer its students at least as much. Columbia, Washington University, Michigan and Harvard are in the same class.

Now would not the State Board of Licensure more certainly obtain the result which I am sure they are conscientiously desirous of obtaining—namely, providing for the child-bearing women of the State, physicians to whom such patients can be safely entrusted—if they demanded of all schools an adequate equipment and time for teaching this subject? It might be objected that some of the schools of the state cannot yet meet the requirements that would be insisted upon by the older civilized countries of the world, and that their graduates would be unjustly barred from practice in this, their own State. If so, would not the energy of the Board of Licensure be better directed by recommending State aid to these institutions, if they need it, to bring their facilities up to the required standard, rather than to force upon every little hospital in the State, a maternity department whether it is needed or not and to insist that these small institutions should give the student a part of his education which he could get much better in his medical school.

By our present law, a student of Columbia's medical department who sees fifty deliveries and witnesses most if not all, the complications that he may have to contend with later, but who has not supplemented his excellent education by personally attending six cases of labor in some small maternity with inferior experience, technic and equipment, is, as I understand it, barred from practice in this State. The same is true of a Harvard student who attends on the average forty cases under expert superintendence. A medical student in his summer holiday might take a three months' course in the Lying-In Hospital of New York City with the largest obstetrical service in the western hemisphere and then would be compelled by our law to supplement this experience with a post-graduate training that would often be worthless. And in our own State, a graduate of the Universities of Pennsylvania and Pittsburgh with a practical training that cannot be equalled elsewhere in the State, must supplement it with a small amount of additional practical training under inferior tutellage.

Another factor deserves consideration. Our whole system of medical education and state licensure in America is open to criticism in its extraordinary lack of uniformity; no other country presents such a spectacle.

Massachusetts, of all places, requires nothing, not even a medical degree; New Mexico requires only a medical degree, nothing else;

while Virginia and Rhode Island have requirements that approach those of the most intelligently governed countries. We, in Pennsylvania, are adding to this confusion worst confounded by adopting a system that I may safely predict will be imitated by no other State.

Would it not be better to conform in principle to the system already adopted by Rhode Island and Virginia, whose example will probably be followed by other States, and would it not be practicable to surpass the requirements of these States in practical training by avoiding Virginia's error in overbalancing clinical instruction by a superfluity of theoretical teaching. We would then set a model for the rest of the States to follow; we would make a uniformity of our State laws gradually attainable; we would really guarantee to the citizens of the State, physicians of the greatest efficiency; we would not admit some who were really not qualified and exclude others who were eminently well fitted to practice.

These questions have given me, whether rightly or wrongly, great concern as one who has devoted a lifetime and an earnest, if humble effort to improve that branch of medical education in which we have been admittedly most deficient.

They are respectfully submitted for the consideration of my colleagues, the teachers of obstetrics in Pennsylvania and the State Board of Licensure.

1821 Spruce St.

TRANSACTIONS OF THE OBSTETRICAL SOCIETY OF PHILADELPHIA.

Meeting of March 2, 1916.

The President, WILLIAM R. NICHOLSON, M. D., *in the Chair.*

DR. BARTON COOKE HIRST read a paper on

THE TRAINING IN OBSTETRICS THAT THE STATE SHOULD DEMAND BEFORE LICENSING A PHYSICIAN TO PRACTISE.*

DISCUSSION.

DR. EDWARD P. DAVIS.—With much that is contained in Dr. Hirst's paper, I am in full accord. The questions suggested by this paper are complex, and many points must be considered.

Undoubtedly the clinical side of instruction in obstetrics needs further development, and the point of the paper is well taken that time allotted for such instruction is much too short. At least three consecutive hours should be given for such teaching.

In what way can this instruction be best accomplished: If we look for the ideal, out-patient service, so far as actual conduct of confinement is concerned, may well give place to systematic clinical instruction in properly equipped maternities. It would be quite as logical for a department of surgery to send its students to the houses of the poor to diagnosticate abscess, dislocation, fracture or beginning inflammation; a department of medicine might for the same reasons, send students to diagnosticate pneumonia, typhoid, and beginning tuberculosis, at the home of patients. It is alleged as the great reason for out-patient obstetric practice,

* See original article page 56.

that the student learns to overcome difficulties which can be met in no other way; but he is forming habits at this time, and these habits should be made where things are done in the best manner, and not in the worst. He should form his habits by practice under instruction in the maternity, and he will have, after graduation, ample time and opportunity to perfect or revise these habits in the first years of his own practice. With modern tendencies in charitable work and medical education, the time will come when out-patient medical service of all kinds will be largely reduced to the work of the social service department, and when the actual treatment of cases of all sorts will be conducted in the hospital. A further and great advantage of hospital treatment is the fact that an instructor can be always available at a hospital, whereas such are the uncertainties of confinement with an out-patient service, that a considerable number of confinements occur before an instructor can reach the patient.

So far as the work of the State Board goes, I believe Dr. Baldy's conception of the situation is eminently correct, that the first duty of the State is to its citizens, and that teaching interest in medicine must coöperate with the State Board to that end. The best service will not be rendered to parturient women until there is in the State a considerable number of competent obstetricians besides those that are found in the principal teaching centers. We endeavor to teach surgery to our students, and hope that but few will become surgeons. The list of The American College of Surgeons looks very large, but in comparison with the lists of the College of Surgeons of England it is not unduly large. It is true that surgery has grown enormously in America, but we have a large country and a large population, and obstetrics has not by any means obtained the same growth. The public needs competent obstetricians in all parts of the State. A certain number of men will qualify themselves to do obstetric surgery safely and successfully. These men will become attached to various hospitals throughout the State, in their maternity departments. The action of the State Board in causing the establishment of maternity wards in all hospitals will greatly aid the development of good obstetric service. These hospitals and their attending obstetricians will form centers of professional growth, and centers of efficient service for the population. While the smaller hospitals cannot be the centers of teaching for a large number of students because they have not the number of cases seen in the cities, yet these hospitals will render important service to the State in educating the local profession and giving relief to patients. The best interests of the population and of the profession, alike, so far as the development of good obstetric practice is concerned, will be served by the action of the State Board in this regard.

There are economic reasons for the renewed interest in obstetrics as a rational means of conserving the population. The waste of human life at present is so enormous that the economic value of human life has become greater. No method of conserving a popula-

tion can be found so efficient as the proper development of adequate obstetric service.

DR. GEORGE M. BOYD.—The question of the advance in the teaching of obstetrics is one of moment and interest. When we think of the progress that has been made since the days of the rudimentary training us older men received back in the 80's, theoretical and without practical instruction, we know that there has been a great gain in this branch of medicine. I am in accord with what Dr. Hirst has said. I feel, however, that we must create a standard, that we must aim as high as possible, and that until we can work in uniformity, until there exists in each State the same requirement, it will be impossible to make the progress we desire. I feel that in the State of Pennsylvania we are a step in advance of some of the others in first requiring a year of hospital practice and part of that time given to obstetric work. The difficulty encountered in the majority of schools teaching medicine is that the student is not under our direct control; he does not live within the walls of the hospital. The hospital year provides in a measure for this defect. While the obstetrical material may be limited in the hospital year the student is in the hospital and has a practical knowledge of the cases. To repeat I feel, that in teaching obstetrics the schools should aim at a standard as high as it can possibly be, and that it should be lived up to. Even in the small hospital there may be seen a variety of interesting cases. I endorse what Dr. Hirst has said of the importance of clinical work and the amount of time that should be given to that part of obstetric teaching. I feel, however, that the didactic course is important, for there is a large part of the teaching of obstetrics that cannot be carried out in the clinic. I have enjoyed the paper and believe that we cannot have a uniformity of teaching until the same requirements for the practice of medicine exist in all States.

DR. ALICE WELD TALLANT.—It is with great pleasure that we listen to any proposition for the improvement of obstetrical teach-in in this country; it is certainly one of the places in which the greatest need exists, and anything that can be done in this direction in this State or in any other is for the welfare of the whole country. It is true as Dr. Hirst has said, that we in America are far from being able to congratulate ourselves upon the requirements in obstetrics. So far as the State of Pennsylvania is concerned we may, at least, congratulate ourselves that there is a minimum requirement, since so many States do not have even this; it is something to have the requirement of twelve cases. In regard to dividing the cases between the undergraduate years and the interne year, I do not understand that the minimum undergraduate requirement of six cases carries with it a stipulation that the colleges shall not give more than these cases. It is perfectly true that to see a large number of complicated cases is of great value, but it is very necessary to emphasize the value of actual contact with the patient. One may watch a forceps or a version case, but it is very different to do it oneself; in the same way, many of the cases

which the students see are a help in certain ways, but not the help that comes from the work which they have actually done for themselves. Dr. Davis takes exception to the out-patient practice. I feel, however, that the training connected with the out-patient practice of obstetrics, in which the students meet emergencies, accept conditions as they find them and bring success out of unfavorable surroundings, is the kind that will be of the greatest help to them when they go out as physicians into places in which the hospitals are not at hand; not only in the foreign field, but in our own country. It is very easy to practise obstetrics in well-appointed hospitals, but many of our students are going into the homes of patients and must make the best of what they find. In our work at the Woman's Medical College I always feel that the out-patient work is of the greatest value.

So far as the State requirements are concerned, practically all our students are already delivering twelve cases in their undergraduate course, but I do not feel that it can do any harm to have six more required after they graduate. We lay as much stress as possible on the practical side; all medical schools do at present. I think that the cases conducted during the college years in a certain way of more value than the same number of cases conducted after graduation, for the reason that in the colleges the cases are conducted according to certain teaching principles laid down in the school. Internes in hospitals do not get as much teaching as they should; the staff, with the best will in the world, may be unable to teach the internes who are in the hospitals, so that they are not given experience under the proper supervision. For that reason I feel that to increase the requirement in the medical school would be of the greatest value. The State has made a fine start in requiring the number of cases that it does, and I have no doubt that it intends to require more as the years go on, and the sooner it requires more, of course, the better. Another help in the improvement of obstetrics would be the establishment of teaching fellowships in colleges, such as we are offering at the Woman's Medical College this year, whereby students may obtain special instruction in obstetrics following their undergraduate training.

These are the chief points that have occurred to me in following the discussion thus far. I do feel that our State has made a good start, but I feel, too, that it needs to go ahead, farther, as I have no doubt it will. Any increase in the requirements of college training is to be welcomed in whatever way brought forth.

Dr. John E. James.—I wish to go on record first of all by stating that I am in absolute accord with the statements which Dr. Hirst has made. I feel that Dr. Hirst has brought forth a subject exceedingly timely. The points Dr. Hirst mentions bespeak an ideal condition for obstetric teaching that must eventually give higher standards in the teaching of obstetrics in the different colleges and improve the practice of obstetrics among the general practitioners of medicine. It is the consensus of opinion among medical educators that emphasis should be placed upon the value

of practical training in the thorough equipment of the medical student. This being true, whether a student can obtain sufficient bedside instruction in the undergraduate year without the supplementary training in the recognized hospital depends upon the number of hours which the college curriculum gives the student and also upon the clinical material available for teaching purposes. The number of hours devoted to the clinical and didactic instruction in obstetrics is decidedly below that which it should be. I, therefore, feel that the law of the State of Pennsylvania in demanding the hospital year supplemental to undergraduate study is a most vitally essential educational adjunct. The greater amount of practical training we give our students the greater will be the reduction in mortality and morbidity—and I believe the morbidity rate is to be considered equally with the mortality—and we shall see a lessened amount of poor obstetrics among general practitioners. Many objections will be raised regarding the hospitals to which men shall go for this supplementary training. The men in charge of the so-called, maternity hospitals in many instances are not of sufficient caliber to give the supplemental training. Likewise many of the hospitals have not sufficient clinical material for instruction. I believe, however, that the hospitals can be brought up to the proper standard by the board of licensure or other board legally appointed. Under present conditions I feel that the position of the Pennsylvania Board of Licensure in demanding a hospital year is a most excellent one. I feel that they should go one step farther and designate by proper control the different hospitals to which the students should be sent for their supplementary teaching.

Dr. J. M. Baldy.—There is nothing that would give me higher pleasure than to be able to attain the ideal and to attain it at once. My experience in the last five years of this work has been that when I have gone after the ideal I have lost the whole gist of that which I was after. Idealism is not attained in leaps and bounds, but by evolution. Now I am in hearty sympathy with all the essayist has had to say regarding what ought to be. The question is, can we get, and are we going to get something until we get the ideal. It must be borne in mind that the teacher in the school has one viewpoint, that the administrator in the State has another. The State should prod on the laggard, but should not set a pace beyond which all can reasonably go. The State is not legislating alone to educate the interne, but to secure the best medical care for the people of the State. The education of the interne, however, reacts upon the people of the State, although his education is a mere incident. I at first thought the solution of this whole matter was very simple, but many things are to be considered in order to accomplish results. I think the essayist himself has not thoroughly understood the Law of Pennsylvania. By it the Bureau of Licensure is not tied down as are all the other States by hard and fast acts of Assembly. There is an element of discretion allowing the Bureau to advance the standard as rapidly as in their judgment is advisable. If the time has come when the medical schools of the State have

performed that which the State requires, then the Board of Licensure will go another step and yet another. That which the State has been doing in the hospitals has been looked upon in two ways, and must not be confused. It is supplementing the work of the medical school. The requirement of the hospital is a minimum of six obstetric cases: so the Act says; a maximum is to be at the discretion of the Bureau of Licensure. The Bureau is ready to advance toward that maximum if the schools of the State are. The people of the State are entitled to a proper practice of obstetrics. We are well aware they are at present abominably served by some of the men on the hospital staffs. The interne often goes out of the school infinitely better prepared to give that service than many on the staffs of many of the hospitals. The State realizes that fully 50 per cent. of the doctors in the State are not fit to teach obstetrics. This requirement of six cases in hospitals is only a beginning and whether we shall succeed in our endeavors to standardize the hospital properly depends upon whether we shall have the backing of such a body as this; we need the backing of the best element of the profession. The work we are trying to do is not meant to take the place of the undergraduate school. If I am assured tonight by any of the teachers of medical schools that they are fully meeting the requirements of the six cases, within a few days we shall have under consideration the increase of the requirement to twelve and when the time is ripe, this will be increased to twenty. I do not mean that every school must follow; but, if five can do so, the others will have to, unless they can show us that it is impossible. It is up to the medical schools to say when the advance shall be made. The doctors in the State in the small communities need proper teaching. There should be installed in all hospitals a certain number of obstetric beds with competent men and then the community could be educated to go to those beds and not to the midwife. Dr. Davis struck the keynote. How are we to get better service to the State if we do not turn out better obstetricians, and how shall we train these men if they are not given opportunities after leaving the school. This was illustrated by an incident in my own town of Danville and is typical of the whole situation: A young man who had been graduated from the University of Pennsylvania Medical School, said to me, "Dr Baldy, what's the use of your Bureau requiring us to take all the laboratory and scientific work we have to take at the college, when we never have an opportunity to use this knowledge." As you give them opportunities they will develop themselves and will give the towns good obstetrics as well as good surgeons and they will be teachers themselves to the younger men who come to them as internes. We cannot accomplish that in a day or in a year. We are endeavoring to lay so solid a foundation that when the politicians put us out we will have left a heritage upon which the profession can build forever afterward.

DR. JAMES WRIGHT MARKOE, N. Y.—This subject interests me greatly. Twenty-six years ago the work of the Lying-In Hospital in the City of New York started from a peculiar circumstance.

Connected as I was with the College of Physicians and Surgeons as house surgeon of the Sloane Maternity Hospital, I found on going to Boston that they had an out-patient department where they taught the students practical obstetrics and I came back very enthusiastic over the idea and presented it to the College of Physicians and Surgeons, but they said the proposition could not be carried out. I called attention to the same service done here in Philadelphia, and still they insisted upon it that it was not practicable, so I started this thing then with the idea of giving outdoor education in obstetrics. Twenty-six years have gone by. Through the indoor and outdoor services of that hospital have passed 100,000 cases; we have educated some six or seven thousand students although we are not connected in any way with any institution. Students come to us—undergraduates and graduates from all colleges and from all States in the United States. They come because we give them something they cannot get anywhere else. This may sound egotistical, but it is not, for we have the most abundant clinical material in New York of any city as it is the largest city of the United States, and therefore must have more clinical material. The question comes up in Pennsylvania, of how to educate the students? My one thought all these years has been for the medical men, alone in the country who are without aid and without consultants within easy reach. I want to give such men a knowledge of obstetrics which will not make them capable of doing a hysterectomy as perfectly as Dr. Hirst or Dr. Davis will do it, but will make them competent to take care of any ordinary cases so that their mortality will be no higher than the general run of the best maternity hospitals. I believe that it can be done by teaching these men at the bedside. I do not agree with Dr. Davis that the out-patient department is of no value. I think the very fact that a man has to take care of a woman where there is nothing at hand but water—and very often that is dirty water—is a very great education. We in the Lying-In Hospital have done this under the strict supervision of as well-educated instructors as we can get. By our plan a man goes to a case and is followed in an hour by an instructor. He is visited every two hours by that instructor, and if he makes any mistakes they are corrected by the instructor, and each student sees from twenty to thirty cases in that way. The first part of their service is given in the hospital where they see a large number of complicated cases from which they have a good idea of their duties in the out-patient department. I have had letters from ex-students saying they would not take a thousand dollars for the experience gained in the tenement houses. We have reduced the mortality in these cases managed by our students considerably below the mortality of the physicians, taking all physicians in the City of New York. We have a great deal better mortality than the run of doctors in the City of New York, notwithstanding that these cases are taken care of by students. When I look back over those twenty-six years and think of the very few teaching institutions there were then in the United States and think of the ob-

stetricians we have sent throughout the towns and cities of this country, I feel proud of the progress made. I do not belittle the fact that we must seek much greater progress but if the State of Pennsylvania, or any other State, will guarantee that their students graduate with a knowledge of what the fundamental principle of obstetrics should be by practical bedside instruction indoor and outdoor it will have accomplished a wonderful amount of work in the right direction.

DR. ALEXANDER MARCY, JR.—Personally I have been very much interested in listening to the papers read and to the discussion following. The sentiment has been quite in keeping with our idea in New Jersey as to what should be required before a license to practise medicine shall be granted. I am free to confess that Pennsylvania at the present time is just a little in advance of New Jersey along this particular line. We in New Jersey have heretofore been leaders in medical licensure and in our requirements, and I think our law at present is second to none in the country, excepting in some particulars. I think Pennsylvania has rather "put it over on us" in this matter of hospital standardization and requirements for the teaching of obstetrics. This year, however, after July 1, we do require in New Jersey a year of interneship before a person will be allowed to come before the Board for examination. We have not, however, stipulated the number of hours he should take in practical obstetrics or the number of cases he shall attend before he comes before the Board. From what I have heard to-night I think we shall have to amend our law, and I think we shall make the number of cases twenty-five.

DR. ADOLPH KOENIG, of the State Bureau of Medical Education and Licensure, Pittsburgh: I did not intend to make any remarks here to-night, but came simply to listen and to gain some ideas. I do feel, however, that I should commend the statements which Dr. Davis has made here to-night; they appeal to me as being good common sense and in keeping with the situation as it exists at the present time. It is an easy matter to say that we should have things idealistic. I am thoroughly in accord with everything that Dr. Baldy has said. As a Bureau, we are absolutely a unit on these things, believing that they are evolutionary. Such an example of inefficiency on the part of an obstetrician as was mentioned by Dr. Hirst is an arraignment against the college graduating such men.

I regret that the Bureau of Medical Education and Licensure has no way of sizing up the personal equation of a candidate or of investigating his ingenuity. That is something which should be done by the college, and I believe is now being done. Twenty to thirty years ago or less the intellectual status of a candidate for the study of medicine was never inquired into by the colleges.

I am thoroughly in accord with the requirements regarding obstetrical experience in the hospitals. The Bureau is standardizing them and investigating their ability to give the opportunity for the acquisition of such experience. An approved hospital stands

between the school and the general practitioner. If the college thinks the present number of required cases right the Bureau I am sure will not object. These hospitals carry the graduate to the time when he will be upon his own responsibility—even though he may not have the highly qualified teacher to supervise, he still has some one to fall back upon when he gets into trouble. That is a condition very much better than the old situation.

I am very glad to be here and to have heard what has been said, and I am heartily in accord with most of the sentiments expressed, especially so with what Dr. Baldy has said.

Dr. Richard C. Norris.—I think this meeting has been well worth while; it has clarified the atmosphere, and has given us all, clearer ideas of what this law established by the State means. Every one will agree, that the higher the college raises its standard in obstetric teaching the better. Unless internes are properly trained in their early experience in obstetrics, they cannot expect to be masters in the art and science of that branch. The orthopedic man, the eye man, the general surgeon, the internist, the laboratory —all clamor for the same advance in their departments while the roster is crowded beyond the student's endurance, and there must come a time when medical students, to be better educated along all lines, will have to use the hospitals for a final year of instruction and experience. The State says to the obstetric-teaching institution, raise your standards as high and rapidly as you will, and we will meet them. They are doing their best now, and they will do better. When we come to study the relationship of the State law as to the year's interneship in the hospital, the paramount question at issue to my mind is the advantage to the community. The matter must be viewed in its relation to the teaching institution, to the student, to the community and to the doctor. As. Dr. Baldy has said the matter is in process of evolution, and no State, not even Pennsylvania, could at once make a law that would meet all these conditions and satisfy every one concerned. Dr. Baldy has also brought out the essential point of the benefit not only to the student, but to the doctor. You will remember that in the earlier days the great surgical operations came to Agnew and Gross who had established teaching centers and developed their art. Those conditions no longer prevail. Hospitals now exist in each community, and have created able surgeons. Where there is a hospital there is a need for a surgeon; when there is a maternity there is need for an obstetrician, and that need will create the supply. So I can see that hospitals compelled by the State to have obstetrical departments, will find the morale, the skill and the experience of their obstetrical staffs increasing rapidly just as surgery has been developed in those hospitals in the recent past. There is no question to my mind that this movement is one to uplift the educational standards of our State in regard to the student and the doctor. If obstetric surgery is developed to its highest point it must be done in our hospitals. Let a man leave his school having seen a large number of Cesarean sections, unless he has had personal,

close range experience, such as he gets in the hospital working with the surgeon, he is not well trained in that particular operation. He must be trained in surgery to meet the demands of modern obstetrics since advances in the latter have been largely surgical. As I have heard the paper and discussion this evening, I have realized more fully that Pennsylvania has put a powerful lever under medical education and especially under obstetrical education, and that as time goes by we shall see more and more the benefits resulting to the profession and to the community and I believe that the objections raised by Dr. Davis to the out-patient department will disappear. In the past the woman had to be treated in her home; the student had to be taught the care of the woman in her home. While the public is being educated to the advantages of hospital obstetrics there will be less and less demand for out-patient obstetric work. However, until every woman seeks hospital service, out-patient training for the medical student cannot cease to have its value. Bearing upon this subject, only to-day I had the Chief Resident Physician at the recently created Maternity Department of the Methodist Hospital look over our records. The new State law brought this department into existence. Since April 19, 1915, we have had 127 confinement cases; five high forceps; seven low forceps; two vaginal Cesarean sections; four abdominal Cesarean sections; three podalic versions; seven induced labors; two craniotomies; one cleidotomy; one ruptured uterus; twelve cases of eclampsia. That one, hitherto, general hospital should have this amount of obstetric surgery to teach five men, shows how valuable this new law is to hospital internes and to obstetrics. Had these cases been in the University Hospital or other college hospitals more students would have seen them, but the knowledge acquired by these five men has been of greater value to them since they actually helped in the work at close range. It is, however, out in the country, in the small community, that this kind of emergency obstetric work will drift more and more into the hospitals equipped for maternity work. I believe we should uphold the hands of our State Board; should ask the colleges to raise their standards higher and higher, and at the same time the State Board should see to it that the hospitals throughout the State are just as efficient in their obstetric departments as in their laboratory and research work, for which the State has set a standard.

Dr. Seneca Egbert.—What I may say is from the standpoint of the Dean who has to keep in touch with the schedules of the various students. I listened to Dr. Hirst's paper with a great deal of pleasure. While the six (or twelve) cases are the minimum number required, I do not believe there are many schools in the State in which the number of cases participated in does not much exceed this amount. The opportunities at the Lying-In Charity Hospital in this city are by no means small, and when we consider the work given here to the medical student in addition to that of the various teaching institutions, we must acknowledge that the number of obstetric cases seen and cared for by the average student

is considerably above that required by the State law. From the standpoint of the school it would seem that so long as it is under the regulations imposed by the various governing bodies, such as the Council on Medical Education which have no legal control but much moral influence, we can do little else than we are doing. At the recent meeting in Chicago of the Council on Medical Education, one of the speakers proposed that some of the present teaching hours be cut out to give the students more time for reading and recreation. From the fact that a medical student has over a thousand hours of scheduled work a year you can get an idea of what he is supposed to do. He must also do a lot of work at night. It seems to me there is chance for possible improvement in rearranging our schedule that obstetrics may be taught in a compact way for a certain part of the senior year. Regarding hospitals, why should there not be established throughout the State certain obstetric hospitals to which men from other hospitals might go for a certain portion of the hospital year and for which the time could be counted as part of that year?

Dr. Charles P. Noble.—We all should feel reassured by what we have heard to-night. Thirty-two years ago I entered the practice of medicine as a student and teacher of obstetrics. For five years I was connected with the old Lying-In Charity. I think it is true that it fell to my lot—not through any merit of my own—to do the first clinical teaching of modern obstetrics in the United States. Just by accident I attended the first course of demonstration of modern obstetrics ever given in the United States in 1883. My teacher was Dr. Neal of Baltimore. Coming to Philadelphia a youth I very promptly became the first assistant at the Lying-In Charity and so it fell to me to give that first course. That was in 1884 or '85. Now the contrast between the obstetrics taught in the United States to-day and that of that time is very gratifying. In spite of the fact that there is very much that should be modified, we are to be congratulated that in one generation so much has been gained. I should also like to congratulate the Philadelphia Obstetrical Society upon the way it has trained its members in speaking. I have not had the pleasure of hearing many of these men speak for a number of years and I think that they have all greatly improved in my absence. I am quite in sympathy with the purport of most that has been said to-night. Certainly with what Dr. Hirst said I am in sympathy, because it is the wish to have here in the United States the ideal which they have all over Europe, except perhaps in England. On the other hand, I believe that Dr. Baldy is quite right in that all through the country these hospitals which have been small comparatively have been the means of training surgeons competent to deal with all kinds of work. It will also be true that in the departments in the smaller hospitals obstetrics will be much better taught and practised throughout the community.

Dr. Charles Edward Ziegler, of Pittsburgh.—I am in entire agreement with the position taken by Dr. Hirst—that the student

should receive his practical training in obstetrics before graduation and not during his year of interne service in such hospital as he may happen to enter. Certainly practical instruction in obstetrics should be regarded as an indispensable part of the student's undergraduate medical education. The teaching of the fundamentals in any branch of clinical medicine is a serious business and to take it out of the hands of trained, responsible teachers and turn it over to poorly or indifferently trained practitioners—too busy and too little concerned to give the matter more than passing consideration—is in my opinion a very grave mistake. Successful and effective teaching is developed and is to be found only in institutions where teaching is seriously, systematically and deliberately done under careful supervision and control. It is generally conceded that the standards in both the teaching and practice of obstetrics in this country are very low—the lowest in fact of all the clinical branches of medicine. Improvement must begin with the medical schools which alone may be depended upon to set the standards. To transfer even a part of this work to the general hospitals throughout the state, over which the medical schools have no supervision and no control, will in my opinion accomplish two things: First, it will prevent the fullest development of great obstetric teaching institutions so much needed in this country and second, it will lower rather than elevate the standards not only of the teaching but also of the practice of obstetrics.

I am in full sympathy with the work of standardization of the hospitals of the state which is now being carried on so efficiently under Dr. Baldy. In my opinion, however, it should be done, not for the purpose of providing better clinical teaching for students during their fifth or hospital year, but largely, if not solely, for the purpose of securing better medical work on the part of both the attending and interne staffs of the hospitals. I am inclined to the belief, moreover, that on the whole better results would be secured by adding a fifth year to the undergraduate instruction in the medical schools, to be spent in the hospitals which are an organic part of or under the control of the medical schools. During this clinical year, three months should be spent in the obstetric hospital and dispensary services which are a part of the department of obstetrics of the school of medicine. With rising standards in medical education and corresponding reduction each year in the number of graduates, it will be increasingly difficult for the hospitals, whether good or otherwise, to secure internes under the plan so long in existence. At present, recent graduates in medicine enter hospitals very largely for the clinical experience which they hope to receive and the hospitals accept them very largely because of the free service which they are expected to render. The result is that the internes do not receive the training which they should and the hospitals receive poor service. The time is fast approaching when to secure and hold internes, hospitals will have to pay something for their services and this they can well afford to do after the internes have spent a year of undergraduate clinical work under

competent teachers and in favorable surroundings. Such internes would be of real service to the hospitals and as a result would be given wider opportunities for experience, to say nothing of the influence which they would have in elevating the standards of practice in the hospitals which they serve.

Under present conditions of four years of undergraduate instruction in this State, the student should spend several weeks during his fourth year in a well-equipped and properly conducted maternity hospital and dispensary. Such institutions 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, recreation and study. Each labor case must be utilized to the fullest to teach and to learn all that it offers in order that the student may have the largest opportunity possible during the limited period assigned to him for his practical work; and also because by using each and every case as a teaching case, the complications and unusual things are thereby the most certainly discovered and utilized to the great advantage of both teacher and student, to say nothing of the incalculable benefit to the patient. I am well aware that 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 likewise aware that the four years of undergraduate instruction in medical schools is already so fully occupied that not much more can be diverted from other subjects for obstetrics. With a system of intensive teaching such as I have described, much more can be given the student, however, than he now receives. During the time of his service, the student 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. Opportunity 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.

In our work at the Magee 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 thus far 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.

This briefly is the method followed in teaching practical obstetrics to undergraduate students at the University of Pittsburgh. During the coming year we shall have not less than 1500 cases of labor available for teaching purposes. If sufficient time were available we could give to each of the twenty-five members of the present fourth year class the opportunity to conduct personally, under supervision and instruction, twenty-five cases of labor. And this is what we hope, sooner or later, to accomplish for our students before graduation.

DR. HIRST, closing.—I have two things to say: I shall go from this meeting with an even greater admiration for the work done by my old friend, Dr. Baldy, than before I came to it. I fear I do not deserve Dr. Noble's congratulations, for I seem not to have made myself clear. The one thing which I wanted to make clear was the defect in our laws, in not requiring an adequate amount of time to be given to the study of clinical obstetrics on the roster. That is what I would like our legislators to take into account, in addition to cases attended.