

THE UNDERGRADUATE TEACHING OF OBSTETRICS*

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TO APPRECIATE the importance of undergraduate teaching of obstetrics as a determining factor in maternal and infant mortality, we do well to inquire into the conditions which prevail in countries which have a lower mortality rate than do we in the United States of America.

The indictment has been made by many of our American contemporaries that the United States ranks highest among the civilized nations of the world in maternal mortality. Their statements have been challenged on the ground that the maternal mortality statistics of the United States and foreign countries are not comparable. A special subcommittee of the Committee on Prenatal and Maternal Care is studying the comparability of these statistics but its report is not yet available. In the absence of later data the committee wishes to call attention to a discussion of the Statistical Comparability of Maternal Mortality Rates in the United States and Certain Foreign Countries in a report on Maternal Mortality published by the Fed-

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eral Children's Bureau. From this report it appears that the reporting and classification of maternal deaths are fairly comparable in the countries from which statistics are quoted.

The comparison of the maternal mortality rates of the United States and foreign countries has been challenged also on the ground that the statistical comparisons were made in the years 1918-19, during which time the United States was experiencing a ravaging epidemic of influenza. It should be borne in mind that the influenza epidemic of 1918-19 was not confined to the United States but was fully as virulent in Europe during these years. Granting the inevitable inaccuracies of statistics the committee appealed to the Children's Bureau of the U. S. Department of Labor for data from the most dependable source. Under date of June 5, 1930, the Children's Bureau published a statistical table embracing official reports from 25 nations, beginning with 1915 and ending with 1928.* During these years the United States birth registration area expanded from 10 to 44 states. We find in this report that Sweden has fairly consistently maintained the lowest maternal death rate and that the United States has averaged highest of the 25 nations represented in this tabulation. Excluding the influenza years of 1918-19 the statement still holds good that the United States exceeds the other 24 nations in maternal mortality. Omitting the influenza years of 1918-19 and for purposes of comparison, taking the years of 1922, 1923, 1924 and 1925 (there are no available returns from Sweden since 1925), we find that the maternal mortality rate in Sweden was 25, 23, 24, and 26 respectively per 10,000 live births and in the United States, in the same period of time, 66, 67, 66, and 65, a ratio of approximately 1-2.5. Again excluding the influenza years of 1918-19 we find that the first three years represented in the statistical report of the Children's Bureau (1915-16-17), compared with the last three years (1926-27-28) show a maternal mortality of 61, 62, 66 per 10,000 live births, as compared with 66, 65, 69 per 10,000 live births. These rates would bear out the contention, often advanced, that our maternal mortality has not been lowered since 1915, but on the contrary there has been some slight increase in the expanding birth registration area.

Dr. Janet Campbell, reporting for the British Medical Society on "The Protection of Motherhood," 1927, gives England and Wales a maternal mortality rate in 1915 of 39.4 for 10,000 live births and 41.2 in 1926. In France the death rate was 60 for the years 1915-1919 (war years) and Germany (1920-24) has a mortality rate of 51. Norway and Holland share with Sweden with a maternal mortality rate of 25 and 26 respectively for the year of 1925. Dr. Campbell, in commenting on the report said: "The analysis of the causes of deaths serves to show that the majority of fatal cases should be under the

*See page 842.

control of preventive methods and is a striking brief for the urgent need of prenatal care."

It is a thought-provoking commentary that the maternal mortality in the United States during the years of the World War far exceeded that of France, Italy, Hungary, Czechoslovakia, Belgium or England.

Whatever other factors may be operative in producing so wide a discrepancy in the maternal mortality rate of the United States of America as compared with that of Holland and Scandinavia, it is evident that lack of the superior clinical facilities afforded by these countries accounts in no small measure for our deplorable results. In the curricula of the medical schools of Holland and Scandinavia obstetrics shares equally with internal medicine and general surgery, while in the United States, until quite recently, the proportion of teaching hours in general surgery as compared with obstetrics was 4.5 to 1; it is now approximately 2 to 1. Furthermore, the facilities for clinical teaching in Holland and Scandinavia are vastly superior to those found in most of our teaching institutions. In the University of Lund, Sweden, for example, the students devote four months to clinical obstetrics. Each student will have personally conducted an average number of 38 to 40 labors, 1 or 2 forceps cases and 1 or 2 abortions. Some will have performed versions, manual delivery of the placenta and like maneuvers. The students are closely supervised in all their work and have abundant opportunity of witnessing obstetric procedures conducted by the teaching staff. Prenatal and postpartum instruction is stressed in the clinic. Nowhere in the United States can we approach such clinical instruction.

The comments of Aleck W. Bourne, on the teaching of obstetrics and its bearing upon maternal mortality in England apply with added force to conditions existing in the United States. He writes: "The solution of the problem lies in the medical schools, and while we can proudly point to many advances in obstetrics, we are unable to include the teaching of obstetrics as an example of these advances. The bed accommodations in general hospitals are still very inadequate for teaching purposes, and the time devoted to the teaching of this branch of medicine is too short. As a subject of instruction midwifery should rank equally with medicine and surgery."

To ascertain, in detail, the manner in which obstetrics is being taught to medical students, questionnaires were sent to all Deans and to Obstetric Department Heads of all medical schools in the United States, to a large number of hospitals throughout the country and to a selected group of graduates of all medical schools for the purpose of ascertaining how well their undergraduate training in obstetrics prepared them for the general practice of medicine. Following is a brief summary of the replies to these questionnaires:

MEDICAL DEANS

Questionnaires were sent to the Deans of all Medical Schools which provide for four years of instruction. The response was most gratifying, all but seven schools returning more or less complete questionnaires.

In response to the inquiry, *Do you favor a unified department of obstetrics and gynecology?* there was a total of 56 replies with 42 in the affirmative and 14 in the negative. It is gratifying to the committee to note the evident approach to the conditions prevailing on the Continent where the two subjects are almost uniformly combined.

There were 55 responses to the inquiry: *In what years are obstetrics and gynecology taught?* Of this number, 38 answered Junior and Senior years; 17, Sophomore, Junior and Senior years and 2 failed to report. Then followed the inquiry: *In your opinion, in what year should this instruction begin?* There were 55 replies with 35 favoring the Junior year, 22 the Sophomore year. We are to infer from the replies of the Deans to this inquiry that approximately 60 per cent of them favor confining the instruction in obstetrics and gynecology to the Junior and Senior years.

The committee was desirous of ascertaining whether or not there exists in our medical schools a satisfactory *correlation between the teaching of obstetrics and gynecology and the basic sciences*. Accordingly Deans Charles Poynter of the College of Medicine of the University of Nebraska and J. M. H. Rowland of the College of Medicine of the University of Maryland were requested to make a report of their findings and opinions on this question. Their report is to be printed separately. These men are well qualified to pass judgment on this important problem because they have taught the basic sciences, and both have practiced a clinical specialty—one obstetrics and gynecology and the other general surgery. The Deans of 51 schools replied to the inquiry on this point in the questionnaire, 20 in the affirmative, 28 in the negative, and 3 who were only "fairly satisfied."

In a large proportion of the Continental schools a *resident maternity service* is required of the students. We desired to know to what extent this exaction is maintained in the United States and whether the Deans favor the requirements. Replies were received from 57 Deans, of which number 53 expressed themselves in favor and only 4 were unfavorable. However, in response to the inquiry as to whether it is possible to give such a service to their students, only 30 replied in the affirmative, 17 said it was impossible, and 6 were able to give a partial maternity service. In the opinion of the committee this is a problem of prime importance. Such a service would provide direct contact with patients under competent supervision, and it is contended that the opportunity to live in an obstetric atmosphere for a

given time will add greatly to the efficiency of clinical teaching. A maternity service is indispensable if we are to attain to the ideal in the teaching of obstetrics.

We asked the opinion of the Deans as to what, in their judgment, is a *reasonable number of labors for a student to observe*. There were 50 replies to this inquiry. The numbers ranged from 2 to 10 in 10 replies the lowest number being 5, from 11 to 20 in 17 replies, from 21 to 30 in 16 replies and from 40 to 50 in 7 replies. In 39 schools it was possible for the student to observe the number of deliveries which the Dean considered reasonable, in 10 it was not, and one did not report.

The Deans were next asked, "*What is a reasonable number of labors for a student to deliver?*" There were 54 replies. The numbers were as low as 2, 3, 4, 5, 5-6, 7, 8-12, 6-12 deliveries respectively in 8 replies, 6 deliveries in 8 replies, and 8 deliveries in 2 replies. Thirty Deans specified numbers ranging from 10 to 15-20, and six thought the number should be 20 or more, highest number being 30 in one reply. In 37 schools it was possible for the student to deliver the number of patients that the Dean considered reasonable, but only three of these were in schools where more than 15 cases was considered the reasonable number to deliver.

To the inquiry, *Is a hospital intern year required for the degree of M.D., and if so is a maternity service required?* there were 57 replies with only 10¹ reporting that a hospital intern year is required before granting an M.D. degree; in 7 of this number a maternity service is required. The committee is of the opinion that a universal requirement by all medical schools for a rotating hospital service for one year, embracing an adequate maternity service, would go far in solving the difficulties incurred in providing sufficient clinical material in obstetrics for the student body.

As to the *kind of instructors* favored by the Deans, 57 replied; 3 in favor of all full-time instructors, 18 for part-time instructors, and 36 for both.

Finally, to the inquiry as to whether *voluntary and unpaid instruction* in obstetrics and gynecology has been satisfactory there were replies from 51 Deans, 23 answering in the affirmative, 28 in the negative.

GRADUATES OF MEDICINE

With the thought in mind that much valuable information might be procured from recent graduates of medical schools, questionnaires were sent to six graduates of each of the schools listed as giving a four-year course. The years 1921 to 1928 inclusive were chosen. We wanted to obtain from them an expression of opinions as to the value

¹There are 13 medical schools in the United States that require a hospital intern year before granting an M.D. degree. In one of these the requirement becomes effective in 1933.

of their instruction in obstetrics and gynecology in meeting the demands of the general practice of medicine. There were 158 replies to our questionnaires, 6 from the class of 1921, 55 from the class of 1922, 1 from the class of 1924, 4 from the class of 1926, 84 from the class of 1927, 3 from the class of 1928, and 5 not reporting the year of graduation.

Respecting the *length of service* in a maternity, as students and as interns following graduation, we find 8 report a service of 21 to 46 days, 20 of 6 to 16 weeks, 95 of 1 to 12 months, 1 of 18 months and 1 of 48 months. There were 16 of the number who report no maternity service; 17 not replying.

Table I shows the number of deliveries conducted by these graduates during their junior or senior years, or as interns.

TABLE I. NUMBER OF GRADUATES CONDUCTING SPECIFIED NUMBER OF DELIVERIES AS

DELIVERIES	JUNIOR	SENIOR	INTERN
1- 10	33	55	12
10- 20	16	37	18
20- 30	6	17	21
30- 40	4	10	14
40- 50	-	3	5
50- 75	-	5	25
75-100	-	-	10
100-150	-	1	12
150-200	-	-	7
200-501	1	-	7
Assisted	2	-	-
None	81	18	13
No report	15	12	14

These graduates were asked if their *lectures were illustrated by charts, lantern slides, movies, and specimens*. It was revealed in the answers that charts had been seen by 122, slides by 65, movies by 23, and specimens by 115. No charts had been seen by 25, no slides by 69, no movies by 113, and no specimens by 12. It would appear from these reports that at the time referred to (1921-1928) lectures on obstetrics and gynecology were not illustrated by charts, lantern slides, movies, and specimens to the extent justified by their value. However, it is presumed that this important feature of the lecture system is receiving more and more favorable consideration.

In answer to the inquiry concerning *special laboratory instruction* in obstetrics and gynecology only 57 report special laboratory instruction in obstetrics and 62 report special laboratory instruction in gynecology.

In respect to *manikin courses* we learn that of the 158 graduates 111 were permitted to perform obstetric manipulations on the manikin, 47 were privileged to witness such procedures, while 32 did no manipulations on the manikin and 95 had no demonstrations. As to hours devoted to these operations and demonstrations we find about

one-third of the number had less than ten hours in these exercises, another third less than fifteen hours and the balance from sixteen to ninety hours. Not a creditable showing for so valuable an adjunct to obstetric teaching.

We were desirous of learning to what extent *students are permitted to deliver cases in the home*, unattended by a capable instructor and clinician. Of the 158 answering this inquiry, there were 96 who were so accompanied, most of the remainder were neither accompanied nor instructed by a competent obstetrician. In a single instance or two it is recorded that they were accompanied by a senior student or intern and a few others replied that they were accompanied sometimes, or in complicated cases. The committee can see no justification for the practice of permitting students to deliver women in their homes unaccompanied by a competent instructor.

Of the 155 replies to the inquiry: *Did you have a resident service in a maternity?* 78 replied in the affirmative and 77 in the negative. In their residency 7 observed 1 to 10 cases and 25 delivered an equal number, 21 observed 10 to 20 cases and 19 delivered a like number, 21 observed 20 to 50 cases and 8 delivered an equal number, 10 observed 50 to 100 cases and 5 delivered an equal number, 7 observed 100 to 301 cases, and 2 delivered an equal number, and 1 observed 500.

Table II shows the number of abnormal cases seen by these graduates when they were students and interns.

In respect to the *time employed in prenatal clinics as students and interns* we find that out of 149 replies only 3 report 12 to 40 hours, 34 report 1 week-4 $\frac{1}{8}$ months, 40 from 1-3 months, 14 from 4-6 months, 12 from 4-12 months. About an equal time was employed in post-natal clinics. There were 15 who reported no prenatal clinic work; 49 no postnatal clinical experience and 7 did not reply.

In the opinion of the group *gynecology was well correlated with obstetrics*. This was the expressed opinion of about four-fifths of those reporting.

HEADS OF DEPARTMENTS OF OBSTETRICS AND GYNECOLOGY

Replies were received from the Heads of Departments in 40 schools. Of this number 20 have combined departments of obstetrics and gynecology and 20 have separate departments. In the latter group of 20 schools there are two in which gynecology is combined with surgery. Where the departments are combined the explanation given for the combination is, in the majority of instances, for administrative and pedagogic reasons.

Of the 20 schools in which *gynecology and obstetrics are combined* 15 regard obstetrics as the major subject, one regards gynecology as the major, 3 regard them as equal in importance, and one does not report. Again we find in the group of combined chairs that the Head

TABLE II. NUMBER AND TYPE OF ABNORMAL CASES SEEN AS STUDENT AND AS INTERN*

	ABORTIONS		TOXEMIAS AND ECLAMPSIAS		CONTRACTED PELVES		PLACENTA PREVIA		ABLATIO PLACENTAE		POST-PARTUM HEMORRHAGE		BAG IN-DUCTIONS		FORCEPS		VERSIONS		EPISIOTOMIES		PERINEORRHAPHIES		MED. AND SURG. COMPLICATIONS	
	STU- DENT	IN- TERN	STU- DENT	IN- TERN	STU- DENT	IN- TERN	STU- DENT	IN- TERN	STU- DENT	IN- TERN	STU- DENT	IN- TERN	STU- DENT	IN- TERN	STU- DENT	IN- TERN	STU- DENT	IN- TERN	STU- DENT	IN- TERN	STU- DENT	IN- TERN	STU- DENT	IN- TERN
TOTAL	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158
1- 5	43	16	58	38	58	44	58	66	17	31	45	61	51	50	53	17	66	67	41	20	31	12	31	28
5- 10	20	19	14	22	15	29	6	17	1	2	5	17	9	20	30	17	10	19	17	16	18	12	14	18
10- 15	14	13	14	20	1	9	-	8	-	3	-	6	2	9	13	18	2	10	7	17	12	11	4	14
15- 20	1	7	4	14	1	1	-	1	-	1	2	-	1	4	5	10	2	4	6	7	4	10	1	4
20- 30	8	19	-	8	-	1	-	-	-	-	-	3	1	2	6	29	-	4	4	12	4	15	2	10
30- 50	1	13	-	4	1	2	-	-	-	-	-	-	-	2	1	11	-	1	1	10	6	13	-	1
50-100	1	12	-	3	-	-	-	-	-	-	-	-	-	-	1	6	-	2	-	3	2	15	1	1
100-150	-	6	-	1	-	2	-	-	-	-	-	-	-	1	-	3	-	-	-	4	-	8	-	-
150-200	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
200-301	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	1
Some	13	18	10	13	17	13	6	7	8	8	11	15	4	8	10	13	7	10	14	23	18	21	30	31
None	34	11	36	12	39	31	63	34	100	81	69	32	63	36	19	12	47	18	45	23	39	16	46	21
No report	23	22	22	23	26	26	25	25	32	32	26	24	27	26	20	21	24	23	23	22	24	23	29	29

*See page 800.

of the Department is an obstetrician in 17 of the 20 schools and that he is a practicing obstetrician in every instance. Three of the Heads report that they do not practice obstetrics but do practice gynecology. In the 20 schools having a combined department all but one Head practice gynecology (one not reporting), and with but 3 exceptions they also practice obstetrics. While it may be unreasonable to require of the Head of a combined department that he should be equally qualified in the two fields, a near approach to this ideal would be desirable. The two subjects are so intimately related as to be inseparable and the Head of the combined departments should have a practical as well as a theoretical knowledge of both.

We are pleased to note that in all of the combined chairs the department Head conducts classes in obstetrics; didactic in every instance and clinical in all but one instance. Gynecology, however, is not taught didactically by 6 of the Heads and clinically by one. From this we would infer that the two types of cases appear in the clinics.

The question was asked whether ideal results would obtain in a combined department if the Head of the Department were an obstetrician only or a gynecologist only. The answers to this inquiry were not convincing in that they were evidently inspired by the personal attainments of the man who happened to be the Head. If a gynecologist, the answer would be "yes," if an obstetrician the answer would be "yes," but if he were both an obstetrician and a gynecologist the answer would be "no." Again the question was asked, Is it necessary for a Head of Department to have an avid interest in both obstetrics and gynecology? Of 52 Heads answering, 7 answered "no," 4 did not report and 40 said "yes."

Should an obstetrician practice gynecology? This question was answered in the affirmative by 36, in the negative by 3, and 1 made no report. It was contended that the exactions of an obstetric practice would unfit one for operative work. The committee finds difficulty in assenting to this criticism.

Replies received from Heads of Departments in 40 schools disclose but 13 schools having *special maternity hospitals affiliated with their schools*. The number of beds in these maternity institutions ranged from 39 to 200 and about an equal number of cribs. The total number of obstetric beds in the affiliated maternity hospitals was under 100 for 7 schools and over 100 for 6 schools. The total number of deliveries in affiliated maternity hospitals was less than 500 for 3 schools, 500-2000 for 4 schools and above 2000 for 5 schools. The duration of student residence in the affiliated maternity hospitals varied from one week to one month for 9 schools reporting. The students were assigned in groups of 2, 3, 4 and 6. The number of deliveries conducted or assisted in by students in affiliated maternity hospitals was less than 20 in 9 of the 11 schools reporting on this item. In two schools

the students had opportunity for witnessing as many as 60 deliveries. Twenty-eight medical schools reported affiliations with 48 general hospitals. Several schools did not reply to this question. Only 1 of the 48 hospitals was reported as not having a segregated division for obstetric service, and 1 school failed to answer this question. Twenty-nine reported on the number of normal deliveries students saw in affiliated general hospitals. In 13 schools the number was less than 15, in 9 schools it was 15 to 30, and in 7 schools it was more than 30. The size of the student group attending a delivery was usually less than 10. Seventeen schools reported on the number of pathologic cases seen by students in general hospitals. In 8 schools they saw from 1 to 5 cases, in 5 schools from 6 to 10 cases and more than 10 in 4 schools. Twenty-eight schools replied to the question on the number of deliveries conducted by students in general hospitals. In 11 schools the number of student deliveries ranged from 1 to 10 and in 8 schools the number was over 10 (one said "6-20") ranging as high as a possible 30 in 2 schools. In 9 schools the students conducted no deliveries but in 6 of these they had an opportunity to assist at deliveries. It is in this particular that obstetric teaching in the United States suffers most in comparison with Continental institutions. Witness the University of Lund, Sweden, where the students devote four months to clinical obstetrics as residents in a maternity hospital where they deliver an average number of 40 patients, and where the students are permitted to make one or two forceps deliveries and to supervise one to two abortions. In all this they are rigorously supervised and have opportunity of observing large numbers of normal and pathologic cases. With such clinical facilities afforded medical students, and midwives to a like degree, it is small wonder that Sweden leads the world in low mortality rate.

The questionnaire study showed that *prenatal clinics* were in operation in 37 of the schools and in one the clinic is in process of organization. Of this number 12 clinics were open less than ten hours a week and 19 were open ten to twenty hours a week. In a single instance the clinic was open forty hours a week. Six schools failed to report on this item. The daily attendance was 20 or more in about one-half of the clinics. In 2 clinics the attendance ranged from 30-50 and in 1 from 40-60. Each of 9 prenatal clinics reported an average yearly attendance of more than 5000 patients and each of 11 clinics reported 2000 to 5000. The balance either had less than 2000 or did not report on this item. (The figures on attendance were interpreted to include return visits.) The number of students in attendance at the clinics daily ranged from 2 to 18, 10 schools reporting more than 6 students in attendance per day. In 14 schools the students spent twenty-five hours or more in the clinics. In the other schools reporting, the time was less than twenty-five hours. The number of

patients seen at these clinics by each student was less than 10 in 4 schools, more than 10 but less than 25 in 3 schools, between 25 and 50 in 8 schools and 50 or more in 12 schools, running over 100 in five schools. The others did not report. The number of patients examined by each student at clinics was about the same as the "number seen" in most of the schools. In 27 schools students were required to practice both external and internal pelvimetry; in one school they practiced internal pelvimetry occasionally and in 8 schools they practiced only external pelvimetry. It is encouraging to note that so large a proportion of the schools have prenatal clinics. It is evident that in most institutions this important phase of clinical teaching is not developed commensurate with its importance but it is a beginning that augurs well.

Thirty-three schools reported *postpartum clinics* in operation. Two more had them in course of organization. The average time these clinics were open was two to six hours a week. About one-third the number were open ten to fifteen hours and 1 for forty hours. The daily attendance ranged from 1 to 5 a day to 15 to 20; the highest 40 to 50. Twenty-four schools reported the yearly attendance at post-natal clinics. In 3 schools it was reported to be less than 200; in 12 schools the attendance was between 200 and 500, and in 9 schools it was more than 500, running as high as 1500 in 3 schools and 600 in one. The number of students in attendance per day in the postpartum clinics ranged from 1 to 12, the average being around 6. Their hours in attendance are in some instances elective and when required they average about 20 with a minimum of 5 and a maximum of 66. Here again we find encouragement. The ideal in obstetric practice is to follow through in the endeavor to leave a healthy mother in possession of a healthy child, hence the importance of postpartum observation and direction.

Thirty-five schools had a *home delivery service*, two had none, and three did not report. Students were reported as conducting home deliveries in groups of 2 usually, but sometimes alone or in larger groups. All schools reported some supervision of students by physicians in conducting home deliveries, but in 24 it was intermittent and in 2 it "depended on the case." In 17 schools students conduct labors to conclusion unsupervised. Ten of these qualified their answers as follows: Five stated "if they are normal"; two, if they are "normal multipara"; one, "after two supervisions." Two other schools replied "sometimes" and "not always" respectively. Thirty-one reported on the number of patients delivered in their homes by students. Four schools reported none and one said "voluntary." In 18 schools the student delivered less than 10 patients; in 8 schools he delivered 10 or more. Nineteen schools reported on the number of home deliveries *seen* by students. In 12 schools they saw less than 10, in 7 schools

10 or more. For students to conduct labors to conclusion and unsupervised is an indefensible practice in the judgment of the committee. Such conditions are not in the interest of the public and are worse than valueless to the student.

Twenty-seven schools reported that students made *local examinations*. These were usually specified to be rectal and abdominal, only two schools saying that students made vaginal examinations, and in one of these he was permitted to make only one vaginal examination. The replies to the following queries were as follows: Are you satisfied with your clinical facilities? Yes—14, No—23. Are you satisfied with your staff personnel? Yes—19, No—18. Are you satisfied with your equipment? Yes—14, No—22. *Have you the block system for your clinical teaching of obstetrics?* Yes—20, No—16. Are courses and hours in Internal Medicine disproportionately great as compared with obstetrics? Yes—12, No—24. *Are courses and hours in surgery disproportionately great as compared with obstetrics?* Yes—24, No—10, Questionable—2.

COMMENTS OF HEADS OF DEPARTMENTS

It is of interest to note the various comments of Heads of Departments appended to the replies from questionnaires. Following is a summary of their expressions:

1. No student should be permitted to take the State Board Examination until he has completed several months of maternity service.
2. A longer required maternity service for students is essential.
3. Conditions would be improved by "trying to impress upon medical school administrators that obstetrics is an art, not a joke."
4. More money is needed to pay Junior full-time men.
5. All schools should have a Maternity Hospital connected with the University Hospital where students may reside. Increase of obstetric beds absolutely controlled by the schools, in a separate building but in direct physical connection with the University Hospital. Greater effort on the part of the obstetric department in the training of teachers and research workers.
6. More time for better teaching and for practical work.
7. More free beds and more patients to fill them.
8. Full-time instructors on indoor and outdoor services.
9. Fewer home deliveries or even none, and more opportunity for hospital training.

HOSPITALS

In order to secure information on the length of time interns spend in the obstetric service and the amount and kind of obstetric teaching material available in hospitals, questionnaires were sent to a large number of hospitals throughout the country. There were 241 replies suitable for tabulation from general hospitals with an obstetric

service. One hundred and eighty-one of these are on the list of hospitals approved for internships by the Council on Medical Education and Hospitals of the American Medical Association and comprise a little more than one-fourth of the hospitals included on that list. It is thought, therefore, that the data given, which are for the year 1929, are fairly representative.

The hospitals were divided into four groups for purposes of tabulation as follows: Group I, those having less than 300 deliveries during the year; Group II, those having 300 to 599 deliveries; Group III, those having 600 to 999 deliveries, and Group IV, those having 1000

TABLE III. OBSTETRIC INTERNSHIPS IN GENERAL HOSPITALS

HOSPITALS GIVING SPECIFIED INFORMATION RELATING TO INTERNSHIPS IN OBSTETRICS	LENGTH OF OBSTETRIC SERVICE AND NUMBER OF DELIVERIES PER INTERN IN HOSPITALS GROUPED ACCORDING TO NUMBER OF DELIVERIES			
	GROUP I. HOSPITALS HAVING LESS THAN 300 DELIVERIES	GROUP II. HOSPITALS HAVING 300 TO 599 DELIVERIES	GROUP III. HOSPITALS HAVING 600 TO 999 DELIVERIES	GROUP IV. HOSPITALS HAVING 1000 TO 2000 DELIVERIES
Number of hospitals in each group	57	107	50	27
Number of deliveries in these hospitals	11,678	45,084	38,252	35,709
Number of hospitals offering rotating internships, reporting on number of deliveries and number of interns	56	92	47	19
Number of deliveries in these hospitals	11,478	38,967	35,951	24,588
Number of interns	270	578 ¹	396 ¹	382
Number of hospitals offering rotating internships, reporting on number of interns on staff and length of intern's service in obstetrics ²	43	79	41	18
Average length of obstetric service per intern	2.6 mo.	2.3 mo.	2.5 mo.	1.8 mo.
Average length of obstetric service per hospital	3.6 mo.	3.0 mo.	2.5 mo.	2.4 mo.
Number of deliveries per intern if all interns took obstetric service:				
Minimum number per intern in any hospital	11	9	24	17
Maximum number per intern in any hospital	149	272	309	300
Number of hospitals having specified number of deliveries per intern:				
Less than 25	12	7	1	1
25 to 49	7	15	3	3
50 to 99	23	32	10	3
100 to 199	1	22	23	8
200 and over	-	3	4	3

¹Includes 3 residents in one hospital which had residents instead of interns.

²In a few instances the service in obstetrics was combined with gynecology or surgery, but in most cases there was a service in gynecology in addition to the obstetric service.

to 2000 deliveries. In the discussion the groups are referred to by number. Tables IV and V show the main points in the tabulation.

Type of Internship.—In the absence of specific information to the contrary, all internships were classed as "rotating," using the term in a broad sense to cover all hospitals not giving "straight services." Only 17 hospitals indicated on their questionnaires that they offered a "straight service" in obstetrics, or in obstetrics and gynecology combined. As might be expected, 7 of these were in Group IV.

In most of the hospitals giving rotating internships there was a service in gynecology, or in gynecology and surgery combined, in addition to the service in obstetrics; 12 hospitals reported obstetrics combined with gynecology, and in two others it was combined with something else. A few hospitals made no report or else gave indefinite replies.

Length of Intern's Service in Obstetrics and Number of Deliveries per Intern.—

Averages were made for the following items:

1. Length of the obstetric service per intern in those hospitals with a rotating service that reported on both the number of interns and the length of the obstetric service. This average varied from 1.8 months for interns in the hospitals in Group IV to 2.6 months for interns in the hospitals in Group I. (See discussion below.)
2. Length of the obstetric service per hospital. This average ranged from 2.4 months for the hospitals in Group IV to 3.6 months for those in Group I.
3. Average number of deliveries per intern.

The averages on number of deliveries per intern and the one on the length of time each intern spent on the obstetric service were made on the assumption that every intern took the obstetric service. Undoubtedly they did not, so these are minimum figures and the averages both of the length of each intern's service and the number of cases per intern would be higher if the exact number of interns taking the obstetric service were known.

The number of deliveries which it would be possible for each intern to assist with, deliver, or at least observe, if all the cases could be equally apportioned among all interns and if all interns took the obstetric service, was calculated for each hospital. There were 181 hospitals with rotating internships that gave the necessary information. Of these, there were only 21 hospitals in which there were less than 25 deliveries per intern; in 28 hospitals there were 25 to 49 deliveries per intern; in 68 hospitals there were 50 to 99, and in 64 hospitals the number was 100 or more, being 200 or more in ten of them. The minimum average number of deliveries per intern in any hospital was 9; the maximum was 309. The average of 9 per intern was in a hospital that gave a one-month service in obstetrics and had

TABLE IV. CASES OF COMPLICATIONS OF LABOR IN HOSPITALS

COMPLICATIONS OF LABOR	NUMBER OF CASES, MAXIMUM, MINIMUM, AND AVERAGE IN HOSPITALS GROUPED ACCORDING TO NUMBER OF DELIVERIES			
	GROUP I. HOSPITALS HAVING LESS THAN 300 DELIVERIES	GROUP II. HOSPITALS HAVING 300 TO 599 DELIVERIES	GROUP III. HOSPITALS HAVING 600 TO 999 DELIVERIES	GROUP IV. HOSPITALS HAVING 1000 TO 2000 DELIVERIES
<i>Hyperemesis:</i>				
Number of hospitals reporting on this item	45	80	33	23
Number of hospitals reporting no cases	5	7	4	—
Minimum number of cases in any hospital	1	1	1	2
Maximum number of cases in any hospital	25	20	115	40
Average per hospital	4.5	5.5	10.5	15.2
<i>Eclampsia:</i>				
Number of hospitals reporting on this item	50	97	37	25
Number of hospitals reporting no cases	4	4	—	—
Minimum number of cases in any hospital	1	1	1	1
Maximum number of cases in any hospital	17	26	15	42
Average per hospital	4	4.4	5.2	11.6
<i>Other Toxemias:</i>				
Number of hospitals reporting on this item	44	80	35	24
Number of hospitals reporting no cases	11	6	2	—
Minimum number of cases in any hospital	1	1	1	1
Maximum number of cases in any hospital	14	129	81	194
Average per hospital	13	10.1	13.2	36.3
<i>Placenta Previa:</i>				
Number of hospitals reporting on this item	47	90	40	25
Number of hospitals reporting no cases	2	8	1	—
Minimum number of cases in any hospital	1	1	1	2
Maximum number of cases in any hospital	8	12	32	36
Average per hospital	2.7	2.7	5	8.1
<i>Ablatio Placentae:</i>				
Number of hospitals reporting on this item	31	61	25	22
Number of hospitals reporting no cases	22	28	9	1
Minimum number of cases in any hospital	1	1	1	1
Maximum number of cases in any hospital	2	5	7	35
Average number of cases per hospital	0.4	1	1.9	7.1

TABLE IV—CONT'D

COMPLICATIONS OF LABOR	NUMBER OF CASES, MAXIMUM, MINIMUM, AND AVERAGE IN HOSPITALS GROUPED ACCORDING TO NUMBER OF DELIVERIES			
	GROUP I. HOSPITALS HAVING LESS THAN 300 DELIVERIES	GROUP II. HOSPITALS HAVING 300 TO 599 DELIVERIES	GROUP III. HOSPITALS HAVING 600 TO 999 DELIVERIES	GROUP IV. HOSPITALS HAVING 1000 TO 2000 DELIVERIES
<i>Postoperative Hemorrhage:</i>				
Number of hospitals reporting on this item	40	75	35	22
Number of hospitals reporting no cases	8	9	6	1
Minimum number of cases in any hospital	1	1	1	1
Maximum number of cases in any hospital	18	21	22	50
Average number of cases per hospital	2.7	3.4	3.9	14.0
<i>Uterine Rupture:</i>				
Number of hospitals reporting on this item	33	61	28	23
Number of hospitals reporting no cases	25	47	16	10
Minimum number of cases in any hospital	1	1	1	1
Maximum number of cases in any hospital	1	3	3	15
Average number of cases per hospital	2.4	0.3	0.7	1.4
<i>Contracted Pelves:</i>				
Number of hospitals reporting on this item	35	76	29	19
Number of hospitals reporting no cases	5	15	2	-
Minimum number of cases in any hospital	1	1	1	5
Maximum number of cases in any hospital	33	42	80	429
Average number of cases per hospital	6	5	11.1	75.5
<i>Abortions:</i>				
Number of hospitals reporting on this item	36	65	26	17
Number of hospitals reporting no cases	-	2	-	-
Minimum number of cases in any hospital	1	1	2	15
Maximum number of cases in any hospital	97	141	169	840
Average number of cases per hospital	32.6	47	84.1	139.4

TABLE IV—CONT'D

COMPLICATIONS OF LABOR	NUMBER OF CASES, MAXIMUM, MINIMUM, AND AVERAGE IN HOSPITALS GROUPED ACCORDING TO NUMBER OF DELIVERIES			
	GROUP I. HOSPITALS HAVING LESS THAN 300 DELIVERIES	GROUP II. HOSPITALS HAVING 300 TO 599 DELIVERIES	GROUP III. HOSPITALS HAVING 600 TO 999 DELIVERIES	GROUP IV. HOSPITALS HAVING 1000 TO 2000 DELIVERIES
<i>Puerperal Infections:</i>				
Number of hospitals reporting on this item	24	45	19	14
Number of hospitals reporting no cases	9	14	4	2
Minimum number of cases in any hospital	1	1	1	2
Maximum number of cases in any hospital	42	130	91	221
Average number of cases per hospital	4.6	7.5	7.7	32.6
<i>Ectopic Gestation:</i>				
Number of hospitals reporting on this item	42	87	33	22
Number of hospitals reporting no cases	6	4	2	2
Minimum number of cases in any hospital	1	1	1	2
Maximum number of cases in any hospital	13	24	31	61
Average number of cases per hospital	3.5	5.4	9.9	14.8

41 interns. It is more than likely that all the interns did not take the obstetric service so that the actual average would be higher than 9. The average of 309 deliveries per intern was in a hospital that gave a four-months' service in obstetrics and gynecology combined and had only four interns on the staff.

These figures show that in most hospitals there are enough obstetric cases available for each intern to receive adequate experience in the conduct of normal labor provided he is given an opportunity to observe, assist at, and conduct deliveries under competent direction. His judgment and skill at the end of his internship will depend largely upon the efficiency of this direction.

Complications of Labor.—Eleven complications of labor were listed on the questionnaire and each hospital asked to report the number of such cases it had during the year. The number of hospitals giving data on the various complications, the minimum and maximum number of cases reported by any hospital and the average are shown in Table IV. In considering the figures, the number of hospitals reporting on each item and the relation of this number to the total number of hospitals in the group as shown in Table III should be kept in mind.

It is quite probable that some of the hospitals that made no report on the number of cases of certain complications of labor had no cases

of that type, but of course this could not be taken for granted and only the hospitals that made a definite report were counted in the tabulation.

While the maximum number of cases of the specified complications of labor in any hospital is high in many instances, this maximum is frequently far above the number reported by any other hospital in the group. It will be observed that the minimum figure in most cases is one. Usually there were several hospitals that had this minimum number of cases and several more with only 2, 3, or 4 cases.

From the number of hospitals reporting that they had no cases of certain types of complications, the small average number of cases per hospital for many complications, and the average length of the

TABLE V. OPERATIVE DELIVERIES IN HOSPITALS

OPERATIVE DELIVERIES	NUMBER OF CASES, MAXIMUM, MINIMUM, AND AVERAGE NUMBER, AND HIGHEST AND LOWEST PERCENTAGE IN HOSPITALS GROUPED ACCORDING TO NUMBER OF DELIVERIES			
	GROUP I. HOSPITALS HAVING LESS THAN 300 DELIVERIES	GROUP II. HOSPITALS HAVING 300 TO 599 DELIVERIES	GROUP III. HOSPITALS HAVING 600 TO 999 DELIVERIES	GROUP IV. HOSPITALS HAVING 1000 TO 2000 DELIVERIES
<i>Forceps Deliveries:</i>				
Number of hospitals reporting on this item	45	93	41	26
Number of hospitals reporting no cases	-	-	-	-
Minimum number of cases in any hospital	1	5	16	17
Lowest percentage of deliveries by forceps in any hospital	0.5	1.4	2.5	1.2
Maximum number of cases in any hospital	101	268	760	465
Highest percentage of deliveries by forceps in any hospital	64.7	73.3	62.3	38.8
Average number of cases per hospital	37.5	71.7	145.4	215.3
<i>Versions:</i>				
Number of hospitals reporting on this item	46	92	40	26
Number of hospitals reporting no cases	3	2	-	-
Minimum number of cases in any hospital	2	1	2	4
Lowest percentage of deliveries by version in any hospital	0.7	0.2	0.3	0.4
Maximum number of cases in any hospital	168	74	248	571
Highest percentage of deliveries by version in any hospital	56.7	14.8	28.6	28.5
Average number of cases per hospital	9.8	11.1	24.7	39.2

TABLE V—CONT'D

OPERATIVE DELIVERIES	NUMBER OF CASES, MAXIMUM, MINIMUM, AND AVERAGE NUMBER, AND HIGHEST AND LOWEST PERCENTAGE IN HOSPITALS GROUPED ACCORDING TO NUMBER OF DELIVERIES			
	GROUP I. HOSPITALS HAVING LESS THAN 300 DELIVERIES	GROUP II. HOSPITALS HAVING 300 TO 599 DELIVERIES	GROUP III. HOSPITALS HAVING 600 TO 999 DELIVERIES	GROUP IV. HOSPITALS HAVING 1000 TO 2000 DELIVERIES
<i>Classic Cesarean Sections:</i>				
Number of hospitals reporting on this item	47	97	43	27
Number of hospitals reporting no cases	4	3	—	—
Minimum number of cases in any hospital	1	1	2	1
Lowest percentage of deliveries by classic cesarean section in any hospital	0.5	0.2	0.2	0.1
Maximum number of cases in any hospital	21	51	61	183
Highest percentage of deliveries by classic cesarean section in any hospital	10.4	9.8	7.3	14.1
Average number of cases per hospital	5.2	9.2	18.3	24.0
<i>Cervical Cesarean Sections:</i>				
Number of hospitals reporting on this item	26	47	17	17
Number of hospitals reporting no cases	22	31	7	4
Minimum number of cases in any hospital	1	1	1	2
Lowest percentage of deliveries by cervical cesarean section in any hospital	0.4	0.2	0.1	0.1
Maximum number of cases in any hospital	8	15	48	66
Highest percentage of deliveries by cervical cesarean section in any hospital	4.0	2.7	5.1	5.0
Average number of cases per hospital	0.5	1.8	7.4	16.3

obstetric service in a rotating internship, it is obvious that most interns will see but few of the complications of labor with the exception of the more common types such as abortion, puerperal infection, and toxemia, and will receive still less experience in the management of such cases. This is borne out by the replies received from recent graduates (Table II).

Fifty-nine hospitals made a report on each one of the eleven complications of labor listed on the questionnaire. Only 7 of them had cases of all eleven types of complications during the year, and a few more had cases of all types except uterine rupture. From this it may be concluded that in but few hospitals will an intern have an opportunity to see all these types of complications of labor even during a

year's internship in obstetrics, and during a rotating internship the opportunity for such experience is largely a matter of chance.

The small averages per hospitals of some of the complications of labor are causes for congratulation. One of the objectives of improved obstetric practice is a further reduction in all of them. In the ordinary course of events each general practitioner will have but few cases of the less frequent complications of labor in his years of practice. The question is how to give him training and experience to enable him to recognize these cases early and to manage them successfully.

The value of using demonstration material to supplement lectures on complications of pregnancy while the student is in the medical school is obvious. In hospitals giving the fifth or intern year of medicine, there should be better organization for teaching, which should include more or less formal instruction by means of conferences, manikin work, moving pictures, charts and slides. Interns expecting to include obstetrics in their practice should be given a major service in this branch. Others need only the minimum. Complicated cases in hospitals should be called to the attention of all interested interns.

There are more than 3500 general hospitals in the United States which are registered by the American Medical Association but not approved for general rotating internships. A number of these have 150 to 400 or more births annually. The possibility of developing special internships of three months or more in the obstetric departments of these hospitals suggests itself as a means of giving additional experience to those interns who wish to include obstetrics in their practice and who receive only a limited amount of obstetric training during their rotating internships. Such services would need to be under the direction of a competent obstetrician.

Operative Deliveries.—There is no dearth of operative deliveries in hospitals and the intern who does not have an opportunity to see a large number of forceps deliveries, at least, will be the exception rather than the rule. The danger seems to be that operative deliveries will be overemphasized in the intern's training and that he will fail to appreciate the importance of conservative obstetrics. A proportion of one-fourth, one-third, or one-half of the deliveries by operative procedures was not uncommon. In one hospital with 867 deliveries, 644 or 74.3 per cent had been by forceps, version, or cesarean section. This hospital is on the list of hospitals approved for internships and had six interns.

Two hundred and five hospitals reported on the number of forceps deliveries: 204, the number of versions, 214, the number of classic cesarean sections, and 107, the number of cervical cesarean sections. Only 27 hospitals in the entire number reported having less than 20 forceps deliveries during the year. Five hospitals reported no deliv-

eries by version, 7 none by classic cesarean section, and 63, none by cervical cesarean section. The minimum and maximum number, the lowest and highest percentage in any hospital, and the average per hospital are shown in Table V.

COMMENTS OF THE COMMITTEE

Instruction in obstetrics to medical students is a desideratum of prime importance in the determination of maternal morbidity and mortality. The better the clinical training of students in the art of obstetrics the better obstetrics they will practice and this, in turn, will be reflected in improved results. Didactic teaching of obstetrics, in the United States, is and has been fairly satisfactory, save that it has been overstressed in many schools for want of clinical material. The need is not for less theory but for more clinical instruction. Our maternal mortality rate exceeds that of any and all continental countries; it exceeds that of Canada and some of the Republics of South America, in short it is the highest of the civilized world. We could go far in correcting this disgraceful state of affairs if our teaching institutions would provide adequate facilities for clinical instruction in obstetrics. The American Medical Association estimates that there are 700,000 women delivered in hospitals annually. This would indicate a wealth of clinical material not available for teaching purposes. The need is for *more maternity beds* and for more patients available for teaching. To fulfill this want the administrative bodies must manifest greater zeal in providing needed facilities. They cannot expect the public to take the initiative in developing maternity hospitals. There is evidence on every hand that such sentiment is being created in administrative circles. In recent years a limited number of excellent maternity hospitals have been erected in conjunction with teaching institutions and in most schools there have been added hours allotted to the teaching of clinical obstetrics. The American Gynecological Society, the American Association of Obstetrics, Gynecology and Abdominal Surgery, the Section of Obstetrics, Gynecology and Abdominal Surgery of the American Medical Association are uniting in making overtures to the Council of Medical Education for a larger recognition of obstetrics in the curricula of our medical schools. As yet they have not received satisfactory consideration from the council. These same organizations have recently inaugurated "The American Board of Obstetrics and Gynecology" for the purpose of raising the standard of obstetric and gynecologic practice in America. Much has been accomplished—more is urgently demanded if obstetrics is to receive recognition on a parity with medicine and surgery. We urge upon the administrative faculties of our educational institutions that obstetrics receive equal recognition with general surgery. Such is its

relative importance in the general practice of medicine and such should be its place in the medical curriculum.

There is much in the findings of the Committee on Undergraduate Teaching of Obstetrics to lend encouragement. We note with satisfaction that the departments of obstetrics and gynecology are combined in about half of the schools answering our questionnaires and that approximately 80 per cent of the Deans of medical schools favor the combined chair. It would seem that in the near future our medical schools will be fully committed to this logical and desirable arrangement. It is effective for didactic and administrative purposes and will result in a greater appreciation of the importance of combining the two specialties in practice.

It is gratifying to note that almost without exception the Heads of Departments are practitioners in their special field. This should insure greater emphasis on clinical teaching.

The correlation of the teaching of the basic sciences with the teaching of obstetrics and gynecology is a difficult problem. It is not satisfactorily solved in most of our medical schools. This important problem should receive the consideration to which it is entitled. The application of the basic sciences to obstetrics can only be satisfactorily taught by a qualified obstetrician.

The committee would emphasize the importance of a resident maternity service for undergraduates and graduates. A well-ordered maternity service with sufficient clinical material is the *sine qua non* of the clinical teaching of obstetrics. There is no adequate substitute. The ideal would be a detached maternity hospital in close proximity to the university hospital and under university control. Only a very limited number of our schools can boast of such equipment.

It is contended by some that with a well-ordered dispensary, where prenatal and postpartum observations may be followed up, a dispensary as an organic part of a maternity hospital, there would be no need to adhere to the long-established custom of sending students into the home for deliveries and postpartum supervision. This plan does not meet with the approval of all members of the committee. However, the lack of adequate dispensary and maternity hospital facilities is no justification for the continuance of an outdoor student service when it implies that untrained students, ignorant of the rudiments of clinical obstetrics, are permitted to deliver patients in the home, unattended by an experienced obstetric teacher. If the school cannot provide a maternity service for their students, then it would be better for their clinical training in obstetrics to be deferred to their intern service. To send a student into the homes of the poor, unattended by a competent clinician, is a menace to the public and a travesty on pedagogy. There are a number of medical schools without a maternity hospital and located in small communities where any

considerable out-patient service is impossible. Such schools might well require a hospital year before granting an M.D. degree and in this hospital year a maternity service would be required. It is questionable if there is any more justification for requiring of the student body the responsibilities in obstetric practice than that they perform a given number of surgical operations. Let us speed the day when dispensaries and maternity hospitals will supply all needed clinical material.

It is the opinion of the committee that instruction should be given to the student body in contraceptive methods and the therapeutic indications thereof. Moreover, it is the opinion of the committee that the students should be given special instruction in the management of abortions.

If there is one universal complaint expressed by the Heads of Departments it is the need of sufficient clinical material for teaching purposes. It is surprising to note that with all this need there is not made more general use of charts, slides, movies, and specimens. Even the manikin courses are too often curtailed or not given at all. Such useful adjuncts to teaching would go far in compensating for the lack of clinical material.

Finally we would stress the importance of prenatal and postpartum clinics. Nearly all Heads of Departments lay claim to such clinics but it is apparent from reports at hand that, with few exceptions, these clinics have not been developed to the extent justified by their importance. Maternal morbidity and mortality could be more than halved by efficient prenatal, intranatal and postpartum supervision. The students should not be denied the opportunity to acquire this much-needed training. The responsibilities of the obstetrician begin from the date of conception and are not at an end until mother and child are made whole and sound.

Preventive medicine has worked wonders in reducing the mortality rate in internal diseases. There is need for similar activity in the field of obstetrics. The development of more and still more teaching maternity hospitals for the better training of medical students, nurses, and midwives in the art of obstetrics, and the intelligent cooperation of the lay public and profession in the care of the expectant mother will do for obstetrics what preventive medicine has done in the general field of medicine.

Happily, we are experiencing an awakening of interest in the preventive phase of obstetrics. We find the leaders in the field of obstetrics stressing the need of vigilant prenatal care. It is this preventive phase of activity that gives promise of placing obstetrics more nearly alongside of medicine and surgery in the onward progress of our science.

The maternal and fetal death rates are partly attributable to the lack of prenatal and other maternity supervision and with no desire to absolve the physician from his responsibilities in prenatal supervision we are of the opinion that the blame rests in part upon the women themselves. Through various campaigns of education conducted by numerous agencies they have had opportunity to know of its importance, yet they are too often indifferent and neglectful. And so the expectant mother disregards instruction, unmindful of the pitfalls that await her. Not until women appreciate the serious aspects of childbirth will they demand that expert guidance which the specialty requires.

We are told that the mortality rate is higher in the cities than in the rural districts; that it is appallingly high among the colored race and that the sparsely settled districts, where facilities are meager or altogether wanting and doctors are few, are suffering by comparison with more thickly populated districts. We are told on competent authority that puerperal sepsis ends fatally in 50 per cent more cases in the cities than in rural districts where surgical interference is less in vogue.¹ Frederick Rice finds the average maternal mortality rate from sepsis in cities to be three per thousand live births and in rural districts 1.9 per thousand live births.² These are thought-provoking statements which should come to us as a challenge. More than half, if not three-fourths, of maternal fatalities, are preventable. Are we to lag behind in the onward march of preventive medicine? The awakening of general interest in prenatal care, the masterly leadership of men and institutions as evidenced here and there and the organized efforts to ascertain facts by such organizations as the White House Conference on Child Health and Protection afford abundant evidence that the time is not far distant when we will make a better accounting of our stewardship.

Our high maternal mortality is not the only urge for better undergraduate teaching of obstetrics. We are confronted with the problem of early infant mortality and stillbirths which are likewise chargeable, in no small degree, to the lack of adequate clinical instruction in obstetrics. The reports of the U. S. Bureau of the Census for 1925-29 inclusive, show a mortality in the first day of infant life of 15.0 in 1925 as compared with 15.3 in 1929; in the first week of infant life of 28.0 in 1925 as compared with 28.1 in 1929 and in the first month of infant life of 37.8 in 1925 as compared with 36.9 in 1929. The rates are for the expanding birth registration area and are made on a basis of 1,000 live births. We observe that not only is the early infant mortality excessive but that there has been no improvement in the years 1925-29. The record of stillbirths, from the same source for

¹Miller, Jeff: *South. M. J.* 19: 882, 1926.

²New York State *M. J.* 29: 262, 1929.

the years 1925-28 inclusive, per 1,000 live births, shows an incidence of 36 stillbirths in 1924 as compared with 35 in 1928 in the white population and of 76 in 1924 as compared with 81 in 1928 in the colored population.

With all the restrictions placed on medical practice we still find obstetrics the one specialty of medicine in which nongraduates are permitted to practice. While progress has been impeded by the attitude assumed by the medical profession and laity alike in regarding childbirth as a physiologic process, we have even more grievously erred in the assumption that childbirth is a pathologic process. The latter view has led to unwarranted and meddling interference and is responsible in no small degree for our deplorable results. The only reasonable and sane position to assume is to regard childbirth, not as an event so natural and devoid of danger as to be regarded with indifference, nor yet so abnormal, as to place it in the category of a surgical specialty. Rather should it be regarded as a process of such intrinsic importance as to call for unceasing vigilance, for masterly inactivity matched with timely thought-controlled interference.

While this report has to do with the undergraduate teaching of medical students we are not unmindful of the need for larger and better clinical facilities for the instruction of graduate medical students, nurses, and midwives. All must share in the benefits of augmented clinical facilities if we are to make any notable improvement in our results.

RECOMMENDATIONS OF THE COMMITTEE

1. Unification of the departments of obstetrics and gynecology in medical schools and in all hospitals affiliated with and controlled by the university.

2. All members of the teaching staff should be qualified obstetricians and gynecologists.

3. The extension of special pathology laboratory courses, manikin demonstrations and clinical clerkships.

4. More liberal use of charts, models, specimens, lantern slides, and movies.

5. Better correlation of the teaching of the basic sciences with the teaching of obstetrics and gynecology.

6. A rotating internship of one year, embracing a satisfactory maternity service, should be required for the licensure for the practice of medicine. It is recommended that an effort be made in all states to secure such legislation.

7. There should be larger opportunities for witnessing complicated cases.

8. The reasonable number of cases for students to participate in delivery under adequate supervision is not less than 25.

9. All student deliveries in the home should be supervised by a teaching obstetrician. Instruction to the students to call for help "when needed" is not adequate supervision.

10. The bloc system for teaching clinical obstetrics.

11. The development of larger and better prenatal and postpartum clinics.

12. More liberal allotment of teaching hours in clinical obstetrics. Teaching hours and facilities should be on a parity with general surgery.

13. Adequate facilities for clinical instruction in obstetrics and detailed instruction in preconceptional, prenatal, intranatal, and postnatal care, preferably in an isolated maternity building, in close proximity to the university hospital and under university control.

14. The development of plans whereby more of the obstetric cases in hospitals not now used for teaching may be made available for that purpose.

15. The committee indorses the recommendation of the American Association of Medical Colleges that 5 per cent of the total hours required for graduation and degree be devoted to instruction in obstetrics.

16. There is need for the general adoption of a comparable form in the catalogues of medical schools which will obviate confusion and insure greater accuracy and completeness.