# DISCUSSION ON THE SCOTTISH DEPARTMENTAL REPORT ON MATERNAL MORBIDITY AND MORTALITY.*

THE discussion was opened by Dr Charlotte Douglas, Dr William Hamilton and Professor R. W. Johnstone.

## I. Dr CHARLOTTE DOUGLAS.

Some months ago the Department of Health for Scotland published a report on " Maternal Mortality and Morbidity," which was compiled from the analysis of clinical and socio-economic data dealing with 39,205 births, and 2526 maternal deaths. Before I go any further, it would probably clarify matters if it were explained that this enquiry was instituted, after a lapse of five years, in pursuance of a recommendation made in 1924 by the Scottish Departmental Committee on Puerperal Morbidity and Mortality " that investigation should be made into maternal deaths occurring in Scotland," and also that when death occurs during pregnancy or within four weeks after its termination, the fact of pregnancy should be communicated to the Registrar along with the fact of death. The setting up of this Committee reflected the national uneasiness over disablement and loss of life associated with childbearing, and I should like this Society to appreciate fully that, as a general rule, it is the pressure of public opinion which forces a Government Department to take action of this nature and that the impulses usually come from without and not from within.

For many years it has been evident that the recorded death rate of women in childbirth, unlike most other death rates, has shown no tendency to fall, indeed the tendency has been in the opposite direction, and the rate has remained at about 6 per 1000 live births for some years. It may appear that undue importance is being attached to those 670-700 deaths of mothers which take place each year. The importance of the problem, however, must not be measured by the exact number of deaths alone, but thought must also be given to the related facts, first, of a death taking place during the performance of a biological function ; and, second, that the death occurs in the prime of life when liability to death from other causes is small ;

* Read at a Meeting of the Edinburgh Obstetrical Society, 11th December 1935.

third, such a death socially disorganises a family life and may have far-reaching effects on the development of any young children who are left motherless. Apart from the death of the mother, however, there is also the child to be considered and the fact that early loss of the mother seriously prejudices the infant's chances of life. If we add together maternal deaths, the notified stillbirths and the neonatal deaths, the numbers are such as should make us think. My colleague, Dr M'Kinlay, has prepared the following table for the years 1931-33, which I quote * :—

| | Deaths. | |
|---|---|---|
| Principal Infectious Diseases | 5,548 | |
| Bronchitis and pneumonia, 15 years (usually the sequelæ of the common infectious diseases) | 8,032 | 13,580 |
| Violence, all forms | 8,377 | |
| Motor accidents | 1,937 | 10,314 |
| Tuberculosis, all forms | 12,238 | |
| Bronchitis and pneumonia, 15 years | 17,339 | |
| Malignant disease | 22,136 | |
| Heart disease | 29,646 | |
| Maternal deaths | 1,633 | |
| Stillbirths, notified | 10,661 | 22,675 |
| Neonatal deaths | 10,381 | |

From this table you will see that maternal and associated infant deaths occupy the second highest place in this list, indeed maternal deaths in this three-yearly period are in themselves only slightly less in number than deaths caused by motor accidents. Probably many of you will think that this is a deliberate overstatement of the problem, but the aim of an efficient maternity service takes into consideration not only the care of the mother during pregnancy, parturition, and the puerperium, with the object of securing a return to full efficiency, but also the production of a healthy living infant. In the series of maternal deaths discussed in the report, a living child resulted only in 42·6 per cent. of the cases.

In all, 2527 reports of maternal deaths were considered, but of these 62 had no connection, save that of time, with the pregnancy; therefore 2465 reports were individually assessed and classified into two main groups, viz., unavoidable and "avoidable" in the sense in which that latter term is used in the report. Various comments which have been made show

* Address on "Maternal Mortality" by Dr P. L. M'Kinlay, *Transactions Scottish Association of Insurance Committees.*

that this meaning of "avoidable" has not been generally realised. "Avoidable" has been used in the sense of the following example: If it is supposed that a patient admitted to an institution suffering from an acute appendix were left too long before operation, resulting in a ruptured appendix, peritonitis, and subsequent death, it could reasonably be said that, had operation been performed earlier, life would probably have been saved. But there is no certainty that the patient would not have succumbed had she been operated upon without delay and before rupture took place. Therefore the word "avoidability" as used represents a probability, and not a certainty, and a preventable death in the sense used in the report must be taken to mean one in which some gross deviation from present-day ideal obstetrical management was found—a deviation believed to have a direct influence on the particular cause of death. If carefully considered, the report shows that there even are degrees of "avoidability," *e.g.* the refusal of a patient to accept hospital treatment when advised. Such deaths were classified as "avoidable" and the blame was assigned to the woman herself because she would not allow herself to be put into the best position to secure satisfactory treatment when that could not be given at home; but there is no certainty that, had she accepted the most ideal treatment, death would not have occurred. At times "avoidable" approaches very closely to certainty, *e.g.* the healthy woman whose pregnancy and labour progressed normally and whose death appeared to be the result of unwarranted interference. In the sense as defined, therefore, 58 per cent. of the maternal deaths were considered to have been "avoidable"; 28 per cent. were assigned to lack of adequate antenatal care (and this figure can be divided into 16 per cent. attributed to the patient and 12 per cent. to the attendant); 26 per cent. were assigned to faulty intranatal care: of this, 4 per cent. were attributable to the patient; 4 per cent. were assigned to faulty care in the puerperium; and almost half of these were attributable to the patient.

Unfortunately, in view of the fact that confidence was a feature of these reports on maternal deaths, the blame for avoidable deaths rests on all attendants equally; but even in the absence of definite information, there was some evidence that in certain areas there were particular offenders, and it would appear that in the practice of obstetrics, as in road accidents, there are a certain number of people—doctors and midwives

—who are accident prone. It appeared to us that this state of affairs was due at times to an inability to realise fully and to assess the conditions present: at times it appeared that this was due to lack of theoretical knowledge, at times to lack of consideration and hurry, and at times to what must be described as panic.

It has been said that this enquiry has not added anything to the science of obstetrics, but, in the ordinary sense, a series of reports made by different investigators could not be expected to do this, nor was that intended. It is, however, a survey of the present-day midwifery, and in this it has succeeded in showing how far the ordinary practice of obstetrics is removed from present-day knowledge, ideals, and teaching. There were many instances where the procedures adopted were of such a nature as to be condemned by every one who has the interests of obstetrics at heart. Numerous examples of this faulty procedure could be quoted. You will all agree that 1 c.c. doses of pituitrin administered once or even twice to hasten the second stage are contrary to accepted methods of practice. In 71 out of 108 cases of failed forceps, the application of instruments before the cervix was dilated was the cause of failure to deliver. In some of those cases spontaneous delivery took place in an institution later. Patients suffering from severe hæmorrhages were subjected to *accouchement forcé*. There were numerous instances of forcible expression of the placenta within less than 15 minutes of the completion of the second stage when there appeared to be no necessity to hurry. Indeed, too often those manipulations produced shock and/or hæmorrhage.

Every one is in complete agreement that the pregnant woman should have adequate supervision, yet 694 deaths were assigned to inadequate antenatal care. For more than half of these the patient was blamed, either for refusing to co-operate or for failing to secure advice. In respect of 300 cases death was ascribed to inadequate antenatal care on the part of doctors, midwives, and institutions. This number of deaths assigned to inadequate antenatal care does not give any idea of the numbers in which such supervision left much to be desired. In all, there were 679 women who did not notify their pregnancy to any attendant; 1041 women notified their medical practitioners of their pregnancy and, in respect of 574 of these, the supervision given could not be criticised; 106 women ignored the advice given to them by doctors,

and in 361 supervision was not given or was perfunctory or, more rarely, there was a serious error of judgment. As regards midwives, in 153 out of 241 cases, advice was either not given or was perfunctory, and in 37 instances the patient refused to follow the midwife's advice. Indeed, in only 38 per cent. of all women who died was antenatal supervision considered adequate.

The main fault which this enquiry showed up with regard to post-natal care lay in a refusal for one reason or another to acknowledge sepsis. Most of the offenders were medical practitioners who kept the patient at home while various methods of treatment were pursued and, in some cases, admission to an institution was only secured when these treatments had failed. Twenty-two women died within a few hours of admission to hospital, and I am sure you will all agree on the futility and cruelty of submitting a dying person to the ordeal of transport.

I think that I have said enough to show you that this enquiry must be regarded in the light of a census of the present-day practice of midwifery in Scotland, and that such a census was the necessary preliminary before any constructive policy could be framed.

## II. Dr William Hamilton.

My first duty—regrettable but inevitable—is to express the resentment of the general practitioners of Scotland in regard to this Report. That resentment is universal. It arises generally from a recognition of the difficulty, through lack of organisation and of leisure, of presenting their case and of a fear that their case may go by default, when on its merits they think it should prevail. It arises specifically from the view that the Report presents a biased, inaccurate, and incomplete survey of the results of midwifery practice in Scotland.

The Report gives an exaggerated view of the seriousness of the problem. Actually it is one of the smaller problems confronting the medical profession in Scotland.

In 1933 there were in Scotland 512 maternal deaths. Cancer caused fifteen times as many, tuberculosis eight times, pneumonia nine times, diphtheria two-thirds of a time as many. If we admit that cancer and tuberculosis deaths cannot be reduced, yet, if present knowledge were applied, 90 per cent. of the diphtheria deaths could be prevented, and perhaps one-

ninth of the pneumonia deaths. I, personally, do not think that the maternal death rate can to any but a negligible extent be diminished by measures on the medical plane ; and, though I think it could be greatly reduced by measures on the social plane, I see no prospect of these measures being taken within the space of one or two generations.

The risk of maternal death is only two-thirds of what it was in 1855, if one takes into account not merely the maternal mortality rate but also the fall in the birth rate.

The risk of a married woman dying in childbed is little more than one-third of the risk a miner has of being killed in the course of a working lifetime of forty years. If one compares the risk of morbidity—slight incapacity, disabling incapacity and delayed death—one finds that morbidity as a result of childbearing is utterly trivial as compared with that resulting from employment in the mining industry.

The two points in the Report which attracted most attention in the profession and among the public were the relatively high maternal death rate in Scotland and the deaths in failed forceps cases.

The Scottish and English rates over a series of years are roughly 6·5 and 4·5 per 1000. The inequality is almost wholly due to differences of classification. Through a carelessness, that is entirely reprehensible in view of the seriousness of the issues, no adequate indication is given of the importance of this factor. Yet Dr M'Kinlay is thoroughly well aware of it, for in the chapter which he contributed to Professor Munro Kerr's *Maternal Mortality and Morbidity*, he presents a table [1] which shows an adjusted death rate for England and Wales of 5·80. According to the Scottish Departmental Committee Report of 1924 the Scottish rate for 1918 [3] was 7·0 per 1000, the English 3·0 ; but, if the influenza deaths during pregnancy and the puerperium had been added in England as in Scotland, the English rate would have been 7·6. The Registrar-General for Scotland has discussed the matter in his Report for 1931.[5]

*Deaths in Failed Forceps Cases.*—The figures given in the report are serious and indicate clearly that some bad midwifery is being done. I have heard many expressions of regret about these cases, but none of resentment at the discussion of them.

The authors are seriously at fault in not having provided a statistical and philosophical background to these figures. With a little difficulty one can calculate that during the period

in which 108 failed forceps cases occurred, there must have been 330,000 births. These figures give one failed forceps death in every 3000 cases of childbirth. If 60 per cent. of all confinements were doctors' cases, and 24 per cent. of doctors' cases were delivered by forceps, then there is one failed forceps death in 432 forceps deliveries.

The authors' analysis of the ultimate method of delivery is not complete for all cases. A considerable minority were delivered by Cæsarean section. In some of these the child was dead. In a majority of the others the child died during or immediately after delivery by Cæsarean section. Surely Cæsarean section in many of these cases must have been an unwise proceeding, but the authors do not investigate this problem.

*Reasons for the Maternal Mortality Rate.*—The Report, without being very specific, indicates that the rate might be diminished (1) by improved antenatal care, (2) by diminution of the forceps rate, (3) by increased hospitalisation, and (4) by elimination of the handywoman. Let me analyse the effect of these factors. I ask you to bear in mind that the mortality rate is rising and that the lowest rate since 1910 is higher than the highest rate before 1910.

(1) *Antenatal Care.*—In my practice practically 100 per cent. of cases get antenatal care. It is a source of comfort and confidence to the pregnant woman. Much can be done to lessen the minor ailments and discomforts of pregnancy. Something can be done to make labour easier in certain cases. As a means of reducing maternal mortality its effect is almost negligible.

According to the Report,[6] 65 per cent. of doctors' and 82 per cent. of institutional fatal cases had received or had had the opportunity of receiving good antenatal care. It is reasonable to assume that amongst non-fatal cases the proportion who received adequate antenatal care must have been at least as high. The contrast between 1900 and 1935 in respect of antenatal care is tremendous. Either the effect on the maternal mortality rate has been nil, or anything that has been achieved has been masked by an increased loss in other directions.

An optimistic view of the value of antenatal care is held by hospital obstetricians, whose chief argument is the contrast in mortality rates between their booked cases and their emergency cases.

This argument is elaborated at great length by Munro Kerr in his invaluable survey of the whole problem.[2] For example, the death rate amongst the booked cases was 12 per 1000, amongst the emergency cases 36 per 1000.

There are certain fallacies here which are very obvious to the general practitioner. The emergency cases are not a true sample. They are a group which have been selected three times—each time in the direction of greater difficulty. The first selection is that they are doctors' cases; the second, that the doctor has picked out complicated cases or cases of anticipated difficulty; the third, that the doctor has sent into hospital cases where special difficulties have developed. The booked cases are not a true sample either. No doubt they include pregnant unmarried women and women returning to hospital after a previous difficult confinement. Yet they must in the main represent a selection of cases in the direction of diminished difficulty, for, if these women were seeking admission to hospital for medical reasons, they would have, in the great majority of cases, been recommended by their medical attendant.

Another fallacy is the assumption that the emergency cases have had no antenatal care.

(2) *The Forceps Rate.*—For a generation the allegation has been made that the excessive use of forceps, the premature use of forceps, and meddlesome midwifery are responsible for a large part of maternal mortality. This allegation is repeated and stressed in the Report.

How does the forceps rate of to-day compare with that of the past? I think there is evidence that it is lower. In the industrial districts of Scotland a generation ago forceps deliveries formed an enormous proportion of the total. In many practices the bulk of the cases must have fallen into two categories—birth before arrival or forceps delivery. No doubt there were industrial practices where the forceps rate was always low, *e.g.* Dr W. Young of West Calder and partners in 1884 to 1903 had 10·5 per cent. of forceps deliveries in nearly 5000 cases, and in 1904 to 1924 had 9 per cent. again in nearly 5000 cases.

A Lanarkshire practitioner tells me that a number of doctors have told him that formerly they applied forceps before the os was fully dilated, provided it was dilatable, whereas now they wait till the os is fully dilated.

The practice which I entered in 1914 had an extremely

high but unrecorded forceps rate. In 1919 to 1923 my forceps rate was 23 per cent. In 1924 to 1935 my partner and I in 1387 cases have had 13·3 per cent. of forceps deliveries, and in the last three years of that period the rate has been 10 per cent. A considerable part of the diminution has been due to the use of pituitrin. Several other practitioners with whom I have discussed the matter strongly confirm my view. Diminution in the forceps rate as the result of the use of pituitrin is confirmed in the Report of the Scottish Departmental Committee, 1924.[4]

On the theory of the authors of this Report the fall in the forceps rate should have resulted in a diminution of the maternal mortality rate. Either no diminution has resulted or it has been masked by an increased number of deaths from other causes.

(3) *Hospitalisation.*—There has been a great increase in the proportion of cases delivered in hospitals. There has been no proportionate decrease in the maternal mortality rate. On the theory of the authors of this Report and of obstetricians generally there should have been a decrease. Where is that decrease or has it been masked ?

(4) *The Handywoman.*—The handywoman has been eliminated from practice in the urban areas. Has the maternal mortality rate fallen in these areas ? Is it lower in these areas than in the rural areas, where the handywoman still does a predominant share of obstetrical practice under medical supervision ?

On the theory of the authors and of obstetricians generally increased antenatal supervision, diminished forceps rate, increased hospitalisation, partial elimination of the handywoman should have been reflected in a diminished maternal mortality rate. No such diminution has occurred. The authors, in spite of the great mass of their material and the laboriousness of their analysis, have failed to prove their case. Alternatively, if they still attribute value to these factors, it is their duty to say what additional causes of maternal deaths have masked the hypothetical value of these factors.

In my opinion none of these four factors is material, save perhaps that of hospitalisation. Unfortunately it was apparently outside the terms of the authors' reference to analyse possible influences of that factor. It seems possible that hospitalisation may be responsible for an increased number of deaths from sepsis.

The Aberdeen Report of 1928 [7] indicates this possibility. The sepsis death rates were for midwives' cases 0·85 per 1000, for doctors' cases 1·4, and for institutional cases 4·5. The authors of the Aberdeen Report assert that these figures are strictly comparable. In fairness to the general practitioners of Scotland the authors of the present Report should have analysed this aspect of the problem.

*Conclusions and Recommendations.*—The striking thing about the conclusions and recommendations is the concentration of the authors on centralised and bureaucratic methods of improving the maternity services of Scotland. They show themselves incapable of realising the part the general practitioner is playing in meeting this problem and the greater part which he might play if he were properly supported. During my twenty years of practice the Department of Health has done nothing to strengthen the hands of the general practitioner. The Recommendations in the Report indicate that the policy of the Department is to remain unchanged and is to consist of :—

(1) Anti-general practitioner propaganda based on inadequate and erroneous analysis of incomplete evidence ; (2) the strengthening and creation of agencies which will ultimately eliminate the general practitioner from the practice of midwifery ; (3) and refusal to help the general practitioner pending his hoped-for elimination.

In my opinion this policy is ungenerous and unwise.

REFERENCES.—[1] Munro Kerr, *Maternal Mortality and Morbidity*, p. 33. [2] Munro Kerr, *Maternal Mortality and Morbidity*, p. 192. [3] Scottish Departmental Committee Report, 1924, para. 13. [4] Scottish Departmental Committee Report, 1924, paras. 74 and 85. [5] Registrar-General's Report, 1931, p. xxi. [6] Department of Health Report, 1935, Table III., p. 17. [7] *Maternal Mortality in Aberdeen*, Kinloch Smith and Stephen, Table XII., p. 47.

## III. Professor R. W. JOHNSTONE.

I am neither the father nor the mother of this Report, but merely one of six godfathers or sponsors, all of whom are Fellows of this Society. My lack of any direct parental responsibility allows me, therefore, to open my remarks with a tribute of sincere praise to its real authors, Dr Douglas and Dr M'Kinlay. This Report with its all-important appendices provides the profession with the most searching analysis of a large number of maternal deaths that has ever been attempted,

and this very significant fact, along with the enormous amount of earnest work which its preparation has involved on the part of the authors, ought first to be put to their credit by all who set out to criticise it.

The persistence of the maternal mortality rate, despite the introduction of antiseptic and aseptic methods in midwifery, and improvements in social and sanitary conditions generally, is certainly a disquieting fact. Probably things are not as bad as they seem, for let us admit at once that neither the actual mortality rates nor the contrast of them with figures of, say, fifty years ago are free from fallacies. The greater accuracy of registration in these days as compared with the past, the inclusion of deaths from abortion (without any corresponding record of the number of pregnancies which end in abortion, but which many of us believe to be more numerous than before the economic " slump "), and other factors which are scrutinised frankly by Dr M'Kinlay in his statistical chapter, all introduce elements of fallacy which tend to swell the apparent death rate ; but, making allowance for that, there is still reason to believe that our maternal mortality figures are larger than they should, or indeed might, be.

From the very nature of its genesis the enquiry, on which the Report is founded, was essentially a study of the causes of a large number of deaths and, as a control, of a much larger number of cases which did not result fatally, rather than a general investigation into the whole question of maternal mortality and morbidity. In such an investigation it seems to me obvious that one of the first questions to try to settle is: How many of the deaths might have been avoided, had there not occurred " gross deviations from present-day ideal obstetrical management," to which the fatal issue could reasonably be attributed ? I can see nothing invidious in such an analysis, seeing that we all, hospital obstetricians, general practitioners, and midwives alike, have contributed to the material studied in the enquiry. In our Royal Maternity Hospital in Edinburgh we have staff conferences every three months at which we study the circumstances of every maternal death, and endeavour to see whether it could have been avoided, and, if so, wherein lay the error of judgment which was primarily responsible for the fatal outcome. As long as we are doing our best there is no blame necessarily associated with the imputation of an error of judgment, while its frank recognition may be a rung in the ladder of improved practice. The proportion of deaths which

might have been avoided (in the sense defined in the Report) is merely the estimation of the degree of improvement which we ought to aim at. To make a judgment in this respect must often have been a very difficult matter, but it was very largely in the hands of the late Dr Haig Ferguson, and that in our Society is tantamount to saying that the judgment was made with the fullest understanding of and sympathy with the difficulties, but without any suspicion of bias. In response to an enquiry, Dr M'Kinlay tells me that if all the deaths regarded as avoidable had, as a matter of fact, been avoided, the maternal death rate for the years under consideration would have been reduced from 6·4 per 1000 live births to 2·56. Such a state of affairs perhaps represents an almost impracticable ideal, but if only half of them had been avoided, the death rate would have been only 4·45 per 1000. Keeping in mind that there must always be a small but irreducible maternal mortality, let us make the figure 2·56 per 1000 our objective, and on the principle that " if we aim at the moon we may hit the steeple," we might perhaps get well below 4·45.

The points which stand out most prominently in the clinical analysis are the apparent failure of antenatal supervision to improve matters and the prevalence of artificial interference with the natural processes of labour. In both of these respects the responsibility is divided between the patient and her attendant.

In nearly a third of all the cases the fatal issue was traced back to the failure of antenatal care. In more than half of these cases (actually 400) the women either did not seek antenatal advice or else ignored it, and nearly one-half of them died from eclampsia, chronic nephritis, or cardiac disease. In the remainder the antenatal advice given was judged to be inadequate. From a study of the Report I hazard the conjecture that some 200 to 300 women might have been saved in the three years under survey had antenatal care been fully sought and followed out in a spirit of co-operation by the patients.

Wherein, then, lies the failure? Not in the principle of antenatal supervision itself. Obviously, it lies partly in the lack of knowledge or appreciation of its importance on the part of the women themselves; partly, I suspect, in the prejudice against such a new-fangled notion amongst the women of the older generation; partly, no doubt, in the

enormous difficulties of its provision in scattered rural areas; and lastly in the shortcomings of the midwives, doctors, and organisations which afforded it. Time does not permit me to go into details, but I suggest that these last shortcomings are due (1) to the fact that the midwife is really not trained to take full responsibility in such a matter, and it should not be put upon her except in a subordinate and ancillary capacity; (2) to the fact that amongst our own profession there is still an inadequate idea of what antenatal care means and an impression, which is all the more misleading because it is a half-truth, that the methods of examination are so simple as to require no special study or practice; and (3) to the fact that it is unsound in principle for one person or organisation to give the antenatal care and another to be responsible for the delivery. It is only by watching a patient throughout pregnancy, labour, and the puerperium that real experience can be gained. The provision of antenatal care ought to be organised in such a way that the doctor or the institution which is to be responsible for the confinement should also supervise the pregnancy, and that where a midwife is to attend the confinement, the patient should always be examined by a doctor on not less than three occasions.* The rectification of these faults is a matter of education and of reorganisation, and should not be beyond our powers.

The second outstanding feature is the undue prevalence of interference with the natural processes of labour. Amongst the fatal cases the interference rate—for practical purposes we may call it the forceps rate—was 51 per cent. Dr Hamilton has, I think, pointed out that this figure gives no appropriate idea of the forceps rate in the obstetrical practice in Scotland in general, and this is a perfectly valid criticism; but in the 39,000 births in six months which were used as a control, the forceps rate was practically 24 per cent. In maternity teaching hospitals, where there is always an abnormally high proportion of difficult and abnormal cases, the forceps rate is about 8 to 12 per cent—that is to say, $\frac{1}{3}$ to $\frac{1}{2}$ of this general incidence. Whether we take the figures, or whether we merely study individual cases quoted in the Report as samples of what is sometimes being done, there seems no escape from the conclusion that there is much unnecessary interference. Here again the doctor may not always be wholly responsible,

* Another important reason for the *apparent* failure of antenatal care is that it may often be completely cancelled by faulty intranatal care.

for I think we shall agree that women are now less tolerant of pain than formerly and that the profession in general is exposed to the pressure of a demand for analgesics and anæsthetics and for early termination of the suffering of labour. With the demand for analgesics and anæsthetics we must all have the fullest sympathy ; but as obstetricians we must keep in view the undoubted fact that the drugs used for the purpose may in some measure interfere with the natural forces, and so determine interference which might otherwise have been avoidable. Furthermore, when a doctor, especially a struggling young doctor, is called to a case by a midwife because of some difficulty or delay in labour, he cannot fail to be conscious that the patient and her relatives, and probably also the midwife, expect him to do something positive and active, and that if he merely advocates patience and perseverance his popularity is likely to be adversely affected. The possible reaction of this on his income must occasionally be in his mind as a subconscious bias towards interference. But when allowance has been made for this factor of a popular demand for interference, there still remains clear evidence of hurry and of premature and uncalled-for interference—the application of forceps before full dilatation of the cervix, which in nine cases out of ten should be scheduled as an obstetrical crime ; of complete failure to appreciate the value of head moulding or to give time for it to take place ; and of the frequent failure to recognise posterior positions of the occiput and to give time for them to rotate.

The type of practice which includes so much unnecessary interference suggests that underlying it is either ignorance or lack of judgment or lack of a full sense of professional responsibility. None of us would be willing to accept the last as an explanation for the shortcomings of any member of our profession if either of the others will suffice, but, whatever the failing be, a study of the Report confirms a most unwelcome opinion which is, I think, *forced* upon all hospital obstetricians from time to time, namely, that there are doctors whose sense of responsible judgment deserts them in obstetrics. The Report shows that there are what we may call " black areas " with high mortality rates, and I believe that if these areas were scrutinised the blackness would be found to be due largely to the practices of a few individual practitioners in them who are deficient in this sense of responsible judgment in their obstetric work. Exactly the same applies to midwives, but

they are under some disciplinary control from the Central Midwives' Board, which can, if need be, suspend them from practice. I think my colleagues on our maternity hospital staffs will bear me out when I say that if practitioners of the type I have referred to could in some way be advised to refrain from midwifery, or could even have the error of their ways pointed out to them, the black areas would thereby be rendered considerably less black, and the morbidity rate, probably also the mortality rate, diminished.

This raises the question of the training of both medical students and midwives. I shall speak only of the medical student. It is rather a lack of judgment than of knowledge that emerges from the Report, and that probably indicates a lack of trained clinical experience, although it does not necessarily do so. No one seriously criticises the systematic teaching of our students, but there is a considerable body of opinion that the practical and clinical training is not fully adequate. Here we, who are teachers, are faced with several difficulties, and I would like to point out to this Society in all seriousness that there are limits beyond which the medical student cannot be taught. These limits, to take them in the inverse order of their importance, are (1) the limits which the curriculum puts upon the time allotted to clinical midwifery, and which economic conditions in turn put upon the curriculum; (2) the number of students in relation to the available teaching material and to the claims of pupil-midwives; (3) the difficulty of maintaining a high level of interest in the student—a level of interest at which he is really susceptible of instruction—over a prolonged course of clinical midwifery unless he is actually living in the hospital, and by virtue of seeing all the work of the hospital and so receiving a rapid succession of mental impressions he becomes imbued with an obstetric sense; and (4) the lack of that most potent of all teaching and formative influences—direct personal responsibility for the welfare of his patient—which simply cannot be given either legally or ethically to the unqualified student except in regard to comparatively minor matters.

I submit to you that the newly-graduated practitioner cannot be an experienced obstetrician, competent to help the midwife in a difficult case, any more than he can be an experienced practical surgeon or physician, and that he should not be expected to be. But what do we find? When the young practitioner goes into practice, either as an assistant

or a junior partner, the midwifery part of the practice is more often than not handed over to him just because he is the junior, and because his seniors want to be relieved of the burden of it. The only conclusion one can draw is that for one reason or another many general practitioners are prepared to put the other elements of practice before their midwifery. The reasons may be quite just and good—I am not challenging them, and every one of us here knows the tax which night work puts upon one's strength and energy. But if the facts are anything like what I have stated, they suggest that many practitioners would be glad to be rid of midwifery practice provided the riddance did not too seriously affect their professional incomes.

I believe that the facts of this Report and of the other similar Reports which have appeared within the last dozen years all point to the need of the establishment of an organised maternity service over the whole country, and, as a beginning, the present Government is committed to the establishment of a service of salaried midwives. Such a service will gradually limit the number and vastly improve the status, the quality and the emoluments of our midwives ; and it should at once remove the very present risk to the patient which lies in the midwife's reluctance to advise her patient to go to hospital lest thereby she lose her fee. In my view any such improvement in the standards of midwifery nursing will inevitably call for a corresponding improvement in obstetric practice, and it is a matter for consideration whether the most obvious, the simplest, and perhaps the best method of meeting this need would not be to develop a national obstetrical service, including whole-time obstetric practitioners, specially trained in resident hospital appointments and specially diplomated. Nothing in the establishment of such a service need interfere with those general practitioners, who wish to practice obstetrics, carrying on their private midwifery practice ; it would only relieve them of that part of their midwifery practice which is ill-paid and which they would probably be quite pleased to give up. The prefatory note to this Report refers to this matter when it says that the clinical sub-committe of the Department of Health for Scotland record " their belief that many of the recommendations of the Report imply a comprehensive service designed to cover adequately the whole field of maternity provision in Scotland." That, I suggest to you, is perhaps the most pregnant sentence in the whole Report.

## Discussion.

*Dr M'Kinlay* said that certain criticisms made by Dr Hamilton of the statistical matter in the Report called for some reply. The fact that in the Report no attempt was made to define the magnitude of the problem relative to others in public health was not a vital omission and, in any case, had since been remedied by the presentation of statistics measuring the loss in more comprehensive fashion. The relative importance of sickness in miners as opposed to sickness in pregnant women was not one which could so very easily be assessed. The mining problem no doubt loomed large in local experience, particularly for those practising in the industrial belt; but national data were required before definite inferences could be drawn. As to the extent and kind of sickness in pregnant women, we have no such accurate information as we have for the mining community. This criticism of the Department, however, loses its point when we note that these two problems had been approached almost contemporaneously. The Report deliberately did not refer to international comparisons of maternal death rates, since the national differences of practice in the allocation of deaths, especially where multiple causes of death were recorded, introduced great difficulties in attempted interpretation, and detailed discussion of such statistics, it was felt, was not likely to do much to elucidate the problems. In assessing deaths as avoidable and unavoidable, it was realised and was clearly pointed out in the Report that there were *degrees* of avoidability and that the underlying idea was seldom one of anything approaching certainty. Dr Hamilton, in discussing the lack of decline in the recorded rates of maternal mortality, had referred to the likely effects of more accurate certification of causes of death and of the declining birth rate with the consequent changing parity distribution. These also had been noted and discussed in the Department's Report, and their influence, it was suggested, was not very great. That an increased number of abortions with decrease in registered live births would raise the maternal mortality rate was well recognised. Dr Hamilton's statement that forceps interference was declining seemed not to be universally applicable. His belief that improvement in social conditions was the most likely factor in causing improvement in the risk to mothers was at variance with the findings of the Department's and other similar reports on the relative insignificance of this factor on maternal death rates.

*Professor Hendry* welcomed this discussion as an opportunity of clearing up some of the misapprehensions which appear to have arisen round this Report. Dr Hamilton deplored the absence of an

adequate background for the Report, but that absence was not entirely the fault of the authors. Dr M'Kinlay set out to secure an accurate record of the whole midwifery practice of the country for a period of six months, so that he might be able to give precisely those figures which Dr Hamilton asked for. It would then have been possible to give the incidence of fatalities in relationship to the total numbers of each complication or procedure. Unfortunately, the schedules issued for this purpose were neither completed with such accuracy, nor returned in such numbers as to give the required record. It was the schedules for the cases attended by practitioners, and therefore the group including the most valuable information, which were least often returned. Dr Hamilton referred to the inaccuracy of employing international statistics in assessing the standard of practice in this country. Those figures were stated in terms of 1 per 1000, and it did require a very fine adjustment to effect a considerable improvement in such figures when dealing with the comparatively small total of cases for Scotland. On the other hand, could anyone read this Report with all its individual records without realising that there was ample scope for improvement? Dr Hamilton spoke of improvement in midwifery practice in most pessimistic terms, but his own record was excellent. There were surely directions in which improvement could be secured. In the Glasgow Royal Maternity and Women's Hospital, the maternal death rate, which in 1926 stood at 25·2 per thousand, was reduced in 1934 to 14 per thousand, with an increase in the total number of cases and a slight increase in the proportion of abnormal cases. To take one special type of case: out of 89 cases of placenta prævia admitted in 1929, there were 15 maternal deaths; out of 115 such cases admitted in 1933, there were only 5 maternal deaths, and the types of cases were in no way different. This improvement was secured essentially by "team" work. If such improvements were to spread over the country there must be adequate facilities for clinical experience for students in the teaching hospitals. One of the greatest handicaps in this direction was the extraordinary demand on clinical material made by the nurses training for the C.M.B. Certificate. Out of over 9000 cases available for clinical experience in the city of Glasgow last year, some 78 per cent. were secured for those pupil nurses. If they accepted the recommendation of the General Medical Council that each medical student should personally conduct 20 cases of labour, then there was not enough material left in their centre to train 100 students. During the year over 180 University students completed their training with those limited facilities, and in addition some 20 extra-mural students. Even if all those 350 pupil nurses were going to practise as midwives, there

would still be a hardship, but not even 10 per cent. of them intend to do so; the remainder just wished to secure an extra diploma. Further, they were not even training pupils for nursing services in Scotland. The Sister-Tutor had informed him that of the 30 pupils just finishing their training, only 12 came from Scotland—there were 11 from England, 5 from Ireland, and 2 from Wales. It was a public scandal that medical students should be deprived of clinical experience under those conditions.

The Maternity Hospitals were failing to provide adequate facilities for medical students, and at the same time failing to train midwives: they had become Post-Graduate Schools for nurses in search of an extra diploma. The "short-term" pupil nurses, even though they had already completed their general training, could not give the highest standard of nursing service in the hospital, because they had not a primary interest in this form of nursing. The nursing services in all maternity hospitals must be of the highest standard, because more and more women were coming to hospitals for their confinements. The Council of the British Medical Association, in their Memorandum regarding a National Maternity Service, stated that "all available evidence suggests that the institution is not safer than the home," but the tendency was very strongly towards institutions. In the city of Glasgow there were in 1929, 23,917 births, and in 1933, 22,480—a decrease of 1437. In 1929, 6451 births were attended by medical practitioners in the patients' homes, but in 1933 only 5123 were so attended—a decrease of 1328. Midwives attended 9765 births in 1929, and 6923 in 1933—a decrease of 2842. The outdoor service of the Maternity Hospital attended 3742 births in 1929, and 4465 in 1933—an increase of 723. The most remarkable fact was that while in 1929, 3939 births took place in institutions, by 1933 this figure had risen to 5946—an increase of 2007. While it might be suggested that certain official publications had drawn patients away from the care of medical practitioners, those same publications showed the midwife wearing a laurel wreath, while the practitioner was clothed in "sackcloth and ashes," but the loss to midwives' practice had been much greater. This tendency to go to institutions for confinements was found not only in the cities, but also in the counties, where women flocked to local maternity hospitals as soon as they were opened. While they had been reminded of the high maternal death rate in maternity hospitals, let them note the figures for the city of Liverpool quoted in the *British Medical Journal Supplement* of 30th November 1935. In Liverpool, out of 18,000 births per annum, 50 per cent. took place in institutions, 43 per cent. under the care of midwives, and 7 per cent. under the care of medical practitioners. In that city, the maternal death rate

for 1934 was 2·8 per 1000, against 4·4 for England and Wales, while the 15 years' average for Liverpool was 3·2 per thousand.

Dr Hamilton had referred to the disappointing results of antenatal care, but the figures quoted by him showed that in his own practice the results of his antenatal care had been excellent. In his practice, however, the ideal arrangement was effective, viz., that the patient was looked after through her pregnancy, her labour, and the puerperium by the same individual. In the antenatal services organised by many local authorities, there was a serious defect, in that the antenatal supervision was not sufficiently closely linked with the intranatal care. A few weeks ago there was admitted to his Wards a " failed forceps " case, which showed how serious this defect could be. The patient had attended a local authority clinic with exemplary regularity from the second or third month of her pregnancy. She reported that the medical officer in charge had made three vaginal examinations in the last few weeks of her pregnancy. She was certified as a suitable case for a midwife's care—she had certainly given birth to a live child spontaneously after a fairly short labour in 1929. Eventually this woman did go into labour under the care of a midwife. When her labour had lasted about 48 hours, a medical practitioner was summoned in the early hours of the morning. He attempted a " high forceps " operation, and failed. He then sent the patient into hospital, where she was delivered by a difficult forceps operation of a live child. The pelvis was of the characteristic flat type—the diagonal conjugate was only $3\frac{5}{8}$ inches. It should not have been an unwarned practitioner who was called in the emergency to this case, but the antenatal attendant, who would at least have learned a clinical lesson.

*Dr Dugald Baird* said that Dr Hamilton had challenged any obstetrician to show improvement in the results of treatment in any maternity hospital and he wished to take up the challenge. An analysis of the maternal deaths occurring in the Glasgow Royal Maternity Hospital during the last five years, 1930-1934, as compared with the previous five years, 1925-1929, showed that while the admissions had risen from 19,134 to 22,425 cases, the number of deaths had decreased from 542 to 457—a mortality of 20 per 1000 in the second five-year period as against 28 per 1000 in the first five-year period. This was not due to fewer abnormal cases in the second five years, since actually the incidence of abnormal cases was 65 per cent. in the second five years and 62 per cent. in the first five years. On further analysis it was found that the fall in the total number of deaths was greatest in the toxæmias, eclampsia, albuminuria, hyperemesis and sepsis—precisely the conditions which,

according to the recent Departmental Report for Scotland, appeared to be on the increase. As regards sepsis the most striking fall in the second five years was in sepsis following spontaneous delivery, where the number of deaths had fallen to half, although the number of spontaneous deliveries in the hospital had increased. To a lesser degree, sepsis following instrumental delivery had diminished. These results were probably due to the practical application of the latest theories as to the origin of the hæmolytic streptococcus. The number of deaths from sepsis following "failed forceps outside" had increased however, due to the fact that the number of cases admitted had risen from 190 in the first five years to 236 in the second five years. There were fewer deaths from eclampsia, due to the fact that fewer cases were occurring, due to better antenatal care. There were fewer deaths from hyperemesis due to earlier admission to hospital, improvement in treatment and improved technique of terminating the pregnancy when necessary. There was very little decrease in the number of deaths from shock, hæmorrhage and intercurrent disease, although as many more of these cases were admitted the mortality from these conditions had diminished. As regards the hæmorrhages, the death rate from placenta prævia had fallen from 13 per cent. to 7·5 per cent., but that from accidental hæmorrhage had remained stationary. There was room for improvement in the treatment of placenta prævia both inside and outside the hospital, as the death rate need only be half the present rate; and many deaths from accidental hæmorrhage could be prevented by contraception.

As to intercurrent disease, most of the deaths in this group were due to cardiac disease, the mortality from which had fallen from 10·4 per cent. in the first five years to 6·4 per cent. in the second. While further improvement might yet be made by admitting these patients earlier to hospital, 72 per cent. of the fatal cases were very ill at the time of admission with severe cardiac lesions and should never have been allowed to become pregnant or continue with a pregnancy. The figures showed conclusively that the maternal mortality in hospital was diminishing, but that there was still room for improvement both inside the hospital and outside, and in the co-operation between the two.

*Dr Mackenzie* (Tain) said that as a medical practitioner he felt deeply hurt when he read the Report. Even although it was not meant to, it conveyed to the public mind a wrong impression of the capacity of the average medical practitioner to do midwifery: it did the practitioner an injustice. Without any detailed evidence, the leading newspapers had published those parts of it which would be of value

as propaganda. In his opinion, it was wrong that departmental officials, even although advised by eminent obstetricians (all without experience of obstetrics in general practice), should assess the blame for mortality as between patient, midwife and medical practitioner. If the implications of the Report were true it reflected gravely on the teachers and examiners of midwifery. There could be little inspiration to these men if this was the outcome of their teaching. But the impression created by the Report was wrong. In thirty years of practice he had had almost three thousand midwifery cases with a mortality of one per thousand and had only seen two cases of puerperal fever, both of which recovered. The average medical practitioner deserved great credit, not blame, for he was as earnest in his endeavour to help women in their distress as the obstetrical specialist and the officials of the Department of Health for Scotland. It was only co-operation by all that would solve these difficult problems.

*Dr R. C. Buist* said he had no intention of speaking deliberately in the discussion, but perhaps after Dr Mackenzie's emphatic and, might he say, absolutely sincere misunderstanding of the Report, it seemed necessary that someone who had been a member of the Advisory Committee should endeavour to put the matter into its right atmosphere. He thought Dr Mackenzie had misread the Report and in particular had read into it charges against the general practitioner. No such charges had been intended and none was in his mind when he signed the Report.

Dr Hamilton started the discussion by throwing a good deal of doubt upon antenatal care. It seemed to him that the practitioner had been confused in the reading and using of the term antenatal care. Dr Hamilton had explained that he and his partner gave antenatal care to all their patients and in his discussion there had been an assumption that the public authority by having special clinics were taking all the credit of antenatal care. Surely antenatal care meant adequate care of the women by whatever means it was given, whether it was given by a competent medical practitioner, given in an organised clinic or given by a specialist. What the Department of Health were contending was that this antenatal care prevented some women from treading the road which leads to death. He was quite sure that no one who had any experience could contradict that statement. There was no one who was not conscious that this woman and that woman had been saved from going to death by his advice. That was antenatal care as he understood it. What was the function of the public authority clinics? In the first place their function was to provide suitable care for women who were not otherwise provided for. It was perhaps different where a woman

had a competent doctor, like Dr Hamilton, and many others who were members of the Society; she had no need, except possibly an economic need, to go to these organised clinics. There were, on the other hand, many women who were not provided for, and for whom medical care was a serious expense; for these the opportunity of going and getting education in the methods of conducting her own pregnancy was very useful. Dr Buist in conclusion said, let us not misunderstand what the clinics could do. They could do so much and in certain areas they were absolutely necessary.

*Dr Fahmy* thought it was a pity that the term " avoidable " in reference to maternal mortality had been used without the definition of this term being made more obvious. The sense in which the word " avoidable " was used was definitely stated, but in a manner not likely to catch the eye of a reader who did not study the Report most carefully. It was perhaps the employment of this term which was at the root of much of the antagonism expressed. It was difficult to believe that the avoidable deaths represented about 60 per cent. of the total, and yet such was the opinion of the authors of the Report. As almost half the deaths were attributable to puerperal sepsis and to albuminuria and eclampsia, it would appear that a reduction of deaths due to these conditions must have a marked effect in lowering the maternal mortality rate. That adequate antenatal care could prevent some of these was certain, but all investigations had shown that fatal puerperal sepsis sometimes followed cases of normal spontaneous delivery. A study of the " failed forceps " cases showed that out of some 108 cases there was no recognisable disproportion reported in 70 per cent. of these. The inference was that, in a number of these at least, instrumental interference was prematurely attempted. It was obvious, therefore, that antenatal care could not reduce the mortality rate appreciably, unless intrapartum care was also of a satisfactory order. Dr Fahmy wondered if the Department of Health had considered supporting the medical practitioner by providing small maternity hospitals, in which the doctor himself had complete charge of his patients. Large maternity hospitals in big centres were essential, but the establishment of a series of small local maternity hospitals seemed to be worth consideration. With a properly trained nursing staff, the supervision of the patient by the doctor could be rendered perhaps more satisfactorily than if the patient were in her own house.

*Dr Keppie Paterson* said that from his seventeen years' experience of antenatal work at the Cowgate Dispensary he was absolutely convinced of its value, but he referred to the difficulties met with

because of the carelessness and ignorance of some patients. There was most careful co-ordination between the antenatal clinic and the students and resident doctor who attended the actual deliveries, so that a case with the slightest abnormality was always approached with the full knowledge of that difficulty being present and, if the resident doctor found it necessary, immediate help could be obtained from the consulting obstetrician.

*Dr Nicholson* said that, as a staunch upholder of general-practitioner midwifery, when carried out in the proper manner, he had particularly enjoyed Dr Hamilton's contribution. No one could possibly deny that a vast amount of admirable midwifery was done by well-trained and careful practitioners. Such conscientious doctors were naturally somewhat embittered by the findings of the Report which might, at first blush, appear to single out the practitioner as the scape-goat in maternal mortality. But he felt quite certain that no such suggestion as this was ever intended. He had enjoyed the remarks made by Dr Mackenzie of Tain, whose results, as regards maternal mortality, were certainly quite as good as could be obtained in the best hospitals. Dr Nicholson felt that, fundamentally, a lack of knowledge by the young practitioner of the *normal* mechanism of labour was a most potent cause of such disasters as Dr Charlotte Douglas had described. This made it imperative that students and young graduates must have the opportunity of watching their cases in the first stage of labour, as they did when taught by dispensary obstetricians forty years ago, and as they could do now, if allowed to attend confinement cases with general practitioners of recognised standing and ability. When young practitioners discovered from personal experience what the natural powers could achieve, it was much more unlikely that forceps would be used too early. Premature interference with labours, both normal and abnormal, was much more common in rural areas when they occurred at a distance from the doctor's house, unless a nurse could be left in charge of the case. If it could be made possible to have a trained midwife with every case, to work in conjunction with the medical practitioner, a real life-saving measure would be established. The suggestion that all cases should be attended by specialists, and delivered in hospitals, he considered quite an impracticable and highly undesirable thing; maternal mortality was highest in hospital practice, and the psychological atmosphere for the patients was, as a rule, at its worst. This was, in his opinion, a matter about which far too little notice had been taken. The process of parturition had become more pathological too, owing to the greatly increased demand for anæsthetics of various sorts. He was afraid that a certain price in maternal morbidity and

mortality had sometimes to be paid for relief of pain, and the artificial shortening of time in labour.

*Dr T. Ferguson* spoke, not as an obstetrician, but as a medical administrator who was attached to that much maligned institution, the Department of Health for Scotland. He said that the problem of maternal mortality was a serious one for the Department and the approach to the solution many-sided. He was disappointed to find that Dr Hamilton thought the Department of Health was anti-general practitioner: the Report under discussion expressly recognised that much good work was being done both by midwives and doctors. He did not think they could afford to exclude the medical practitioner from midwifery practice, but he believed the Department could help him in that work, and in several directions. By the provision of an efficient midwife service, the practitioner could be relieved of a great deal of time occupied by that "masterly inactivity" of which Sir Haliday Croom used to speak—a time consuming factor sometimes making it difficult to reconcile midwifery with a busy general practice. Further, the greatest degree of specialist obstetrical skill must be made freely available. In towns, also, the facilities of local authorities' clinics should be made available to general practitioners—a development for which the Department proposed to press. It was the Department's aim to raise standards: it could not afford to do otherwise. If improvement was to be effected in maternity services, it required the utmost help from the specialist, from the midwife and, certainly not least, from the practitioner.

*Dr Angus Macdonald* (Kelso) said that there were many factors, other than those considered by the authors of the Report, which influenced the curve of maternal mortality. Negligence by the patient and faulty technique on the part of the attendant were personal accusations, unfair to the citizen, and unfair to a body of men claiming no infallibility and working under circumstances worthy of sympathy. More general sociological influences should have been examined. During the period in which maternal mortality had risen two factors were evident (1) the altered status of the doctor, and (2) the altered value of money. Legislative enactments must be remedied to restore the prestige of the doctor and make him again, and in a more fortified way, the "family physician" and at the same time assure the intending mother that her childbearing expenses would all be paid and a doctor and nurse provided. The doctor's fee should be secure and it should be a fixed inclusive fee for antenatal, intranatal and postnatal care, without any tinkering additions for "instrumental midwifery" or anæsthesia.

*Dr Haultain* said he thought too much had been heard of the more familiar voices of the specialists and too little of the less familiar voices of the general practitioners, but certainly what had been lost in the latter case in quantity had been gained in quality. He was sorry that Dr Mackenzie had taken such a personal affront from the Report, as he could assure him that Tain was by no means a " black area." There was, however, a great deal in what Professor Johnstone had said and he was sure that all on the Maternity Hospital staffs, both in Edinburgh and Glasgow, would agree that there were quite definite " black areas " and, indeed, definite " black doctors." If these " black doctors " stopped undertaking obstetric cases the maternal mortality in Scotland would fall very considerably. The distressing fact was that all the medical profession who practised midwifery were bearing the blame for the delinquencies of a very few : these few never attended meetings, and probably never read any of the medical periodicals on the subject, and therefore it was difficult to let them see the error of their ways.

With regard to teaching, the various journals were continually pointing out how improved teaching should have benefited maternal mortality and morbidity, but apparently it had not done so. He would say that teaching had improved greatly in the last ten years, but it had not yet had a chance to affect statistics, as these graduates were only now getting thoroughly into practice : therefore, if intensive teaching was going to be effective, it would not influence statistics for another ten to twenty years. Personally he did not think the present teaching could be improved very much except by increasing the opportunities for practical work and this was always a difficulty when dealing with unqualified students. He did, however, think it was a mistake to send out doctors fully qualified to practise as general practitioners and do midwifery work without their ever having actually used forceps on the living subject or stitched a perineum under supervision. He realised the difficulty in attaining this objective but thought that this might be possible by having a certain number of general practitioners who, being recognised as men good at midwifery work, were authorised by the University or by the Colleges to take students with them to their midwifery cases and teach the practical and social sides of midwifery. He thought also that it was very important that antenatal, intranatal and postnatal work should be done by the same person. At present in many localities antenatal supervision was carried out by Public Health Medical Officers who did not attend the subsequent confinement and thus never learned from their mistakes.

*Dr Orr* said he would like to speak from the point of view of medical education as he was specially interested in that. He would

support Professor Hendry's remark that there was throughout the world in all medical schools the greatest difficulty in getting a sufficient number of clinical cases for the students to be taught on. The material was good and new ideas were being introduced by the teachers, which were never dreamt of in his time, but the difficulty still existed in getting a sufficient number of cases for the students. He thought help could be obtained, as Dr Haultain suggested, if general practitioners took students with them to their private cases. It had been said the public would not tolerate that. That was not so, because when he was in practice he used to take, not once, but many times, students with him to his own private cases, whether difficult or otherwise. First he always explained to the patient that he was proposing to bring with him a student, who would give him help, and never once had he the slightest difficulty in arranging this. He found that in this way he could give these students considerable clinical instruction and they had along with him an opportunity of seeing and attending to a labour in an ordinary practice. The student was not only useful to him but the opportunity was of great value to the student. Dr Orr said that he would urge that consideration be given to permit the general practitioner doing midwifery practice to assume some of the responsibility of training medical students.

*The President*, referring to the probability of legislation being passed with a view to reducing mortality in childbirth, stated that it was obviously better that they, who were primarily responsible and understood best, all the circumstances and difficulties, should set their own house in order and formulate policy rather than have it dictated to them. A discussion of the kind they had had was useful even if it did no more than show that they appreciated the situation and the need for action. They were fortunate, moreover, in having to represent their speciality, a body so active and influential as the College of Obstetricians and Gynæcologists, and he thought it unlikely that any scheme for a national maternal service would be constituted in the formulation of which the opinion of that College and of the various obstetrical societies did not find expression.

He wished to associate himself with the remarks of Dr Buist and other speakers in regard to the resentment which the Report seemed to have provoked on the part of numerous general practitioners. He felt that no hostility was intended in the Report. He did not wish to be thought in any way complacent, but so far as personnel was responsible, he had long held the view that the profession as a whole was unfairly carrying a reproach which should rightly attach to the work only of a comparative few. No doubt the general standard

of obstetrical work should be raised, but it was this small minority of what might be called " untouchables " or " unteachables," for they did not attend meetings of this kind or read journals, and possibly never read the Report itself—it was they who constituted a specially difficult aspect of the problem. It was for this reason he felt inclined to support the recommendation in the Report that every maternal death should be investigated with a thorough review of the circumstances of each case, not with a view to disciplinary action so much as to form a guide to prevention.

*Dr Douglas* (in reply) said that in conducting this inquiry, when the Department had received over 1000 reports of deaths, it was realised that to make a report on deaths alone would not give a finding of real value. Consequently a birth inquiry was instituted and reports of 39,000 births were received, as was stated in the Report. The results of this enquiry were disappointing for various reasons, viz. (1) lack of co-operation which existed in some areas meant that for many births no data were available ; (2) the forms were often badly filled in and at times it was almost impossible to use them.

Social conditions were discussed as far as possible ; the paragraph relating to that was given in the Report on page 69 and showed that the death rate from childbearing from all causes was lower among mothers living in the more over-crowded than in the less over-crowded homes. Bronchitis and pneumonia, as might be anticipated, showed higher death rates in the more over-crowded homes.

She was very sorry that there was an idea abroad that the Department was antagonistic to the general practitioner. That was not so. The Department was entirely neutral and instituted this investigation as a census of the midwifery practice of the country. In adjudicating, greater consideration had been shown to the general practitioners than to institutions. It was said on page 27 that much good work was done by both midwives and doctors. She thought that a study of the evidence suggested that the results obtained were worse in urban and mining than in rural areas. There was no doubt that one of the most disquieting features of present-day obstetric practice was hurried and unnecessarily meddlesome midwifery. There were undoubtedly certain types of cases which repeated themselves from certain areas and she was sure in those areas there were particular offenders. On pages 48 and 49 of the Report was to be found the maternal mortality rates for all causes in the different areas of Scotland. It had been said that there was a lack of philosophical outlook in the chapter on failed forceps. Philosophy did not enter into this ; she had adhered to facts and nothing else.

Someone had blamed the increase in abortions for the increase in the maternal death rate, but in Scotland there had been surprisingly few deaths from abortion.

Dr Buist had described the function and ideals of antenatal clinics. In Scotland, apart from the cities of Dundee and Aberdeen, there were no antenatal clinics north of Argyllshire or Perthshire, and there were very few in the south. There were practically only antenatal clinics in Glasgow, Edinburgh, Dundee, Aberdeen and in the large burghs and counties of Stirling, Dumbarton, Renfrew, Ayr and Lanark. The chief point to remember about antenatal clinics was that the local authorities' Health Committee had been forced by their electors to establish them. The impulse came from the people themselves.

In regard to the terms "avoidable" and "unavoidable" Dr Douglas was now sorry that there had not been a clearer distinction made between them in the Report. Dr Fahmy spoke about the puerperal sepsis rate. On page 32 there was a table giving death rates from puerperal sepsis from 1856 to 1933, and from this it would be seen that the rate had tended to rise. That table was compiled from the figures as recorded by the Registrar-General; albuminuria and convulsions were higher in certain parts of Scotland than in other areas. That might be due to climate or to differences in diet and living generally. As to the provision of small maternity hospitals throughout the country, at the present time there were a great many small maternity hospitals in various places. There was a small maternity hospital in Wick in which one-quarter of the births of Caithness took place. There ought to be some extension of the maternity services in the North; for example, at Lochinver, it would be an advantage to the doctor if he had not to go 40 or 50 miles to a case. She pointed out, however, that the Department of Health did not approve of small maternity units as a general principle. One of the reasons for this had been the very high forceps rate in small maternity hospitals. In some small hospitals the forceps rate was about 50 per cent.