becoming less self-reliant, or may it not be due to a decreased capacity to bear pain and to an increasing demand for rapid termination of labour and especially for anaesthetics?

Finally, we should not forget that there is a certain proportion of obstetric complications that ante-natal care is so far powerless to prevent. These have been recently analysed by Strachan,⁵ and to his paper I shall refer those interested.

I would end on a note of hopefulness. Disappointing as have been the results hitherto we are in the mood for self-criticism, and this may be the prelude to a fresh advance. A conference such as this between two of the Sections most nearly concerned in the success of ante-natal work cannot but result in a fresh integration of effort. And in the words of Walt Whitman: "It is provided in the nature of things that from any fruition of success shall come forth something that shall make a greater effort necessary."

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ARE WE SATISFIED WITH THE RESULTS OF ANTE-NATAL CARE?*

BY

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There is a deceptive simplicity about this question to which we have been asked to furnish a reply. It seems at first sight to require little more than a confirmatory "Yes" from those of us who have been enthusiastic advocates of the provision of ante-natal care. Further consideration, however, shows that the question covers a very wide field, and no such simple confirmation is quite possible. It becomes necessary, indeed, to put two further questions: (1) What is meant by ante-natal care? ; and (2) What results can be expected from it?

It is only by defining in some measure what ante-natal care has meant that we can judge the results which have been obtained. It is obviously useless to feel disappointed with a remedy which has never been properly applied. There is actually an official standard for ante-natal clinics set out in the circular 145/M. & C.W., issued by the Ministry of Health in 1929. This standard was not put forward as an ideal but as a practical minimum for effective usage, and I feel sure there will be fairly general agreement when I say that a high proportion of women receiving ante-natal care, whether at ante-natal clinics or elsewhere, do not receive it at this minimum standard. This may be due in part to faults of administration or to faults in doctors or midwives, but it is also, to a great extent, undoubtedly due to the women themselves, since even when facilities are available and are freely offered full advantage is not taken of them.

Ante-natal Care in Birmingham

We have, I believe, reached the point at which a demand for a high standard of ante-natal care can and will be met, and I feel sure—indeed, there can be little

doubt about it—that such a demand will shortly become universal. This suggestion is supported by the rapidly increasing number of women who present themselves at the ante-natal clinics, and in this connexion the records of Birmingham are of interest. Birmingham first formally opened its ante-natal clinics in 1916. During that year 250 were held, and 561 women attended. Eight years later, in 1924, the clinics had increased to 981, and 4,043 women attended. In 1932 the figures were 1,892 clinics and 8,174 women attending. Meanwhile, the births had fallen from 21,347 to 17,219. A very high proportion of the births are visited by health visitors, and taking these as representing those women who are invited to ante-natal clinics, it will be seen from the table supplied that in 1932 no less than 50 per cent. had attended the clinics.

TABLE I

	1916	1924	1932
Number of ante-natal clinics at child welfare centres	250	981	1,892
Number of mothers attending ...	561	4,043	8,174
Total attendances made ...	No record	10,395	25,983
Births (including stillbirths) ...	21,347	18,934	17,219
Births visited (not including stillbirths)	8,143	15,967	16,190
Percentage of mothers attending from the visited class (approx.)	6 per cent.	25 per cent.	50 per cent.

This represents only a portion of the amount of ante-natal care given and received: taking into account the work of the family doctor, the midwife, and the maternity institutions, it is obvious that the total must be considerable. There can also be little doubt that the standard is as high as anywhere in the country, though space does not permit of a detailed description. As regards the ante-natal clinics, the arrangements for following up and co-operation are fairly complete, and the work is carried out by experienced medical women with every facility for consultation and with sufficient available ante-natal beds.

And yet one is forced to believe that the standard is not sufficiently high in a large proportion of cases. The average attendance per patient in 1932 was three, and when one considers that many women pay from five to eight visits it is clear that numbers pay only one visit. The midwives, although informed when their patients cease to attend ante-natal clinics, cannot, as a general rule, give really effective supervision at the standard laid down in the Ministry's memorandum. They have not the facilities, and the patients are often not very amenable. The lack of sufficient ante-natal care is frequently recorded in relation to stillbirths, deaths in childbirth, and puerperal sepsis investigations.

Ante-natal supervision might be expected to affect maternal mortality in childbirth, neo-natal mortality, and the stillbirth rate. There has been no material improvement in these rates since 1916.

TABLE II

Birmingham	1916	1924	1932
Maternal mortality ...	3.4	3.91	3.73
Neo-natal mortality...	34.4	41.9	32.7
Stillbirths ...	3.5	2.9	3.6

During the last five years every maternal death in childbirth in Birmingham has been investigated as carefully as possible and an attempt made to assess the influence of ante-natal care (Table III). In the deaths from intercurrent disease in this group fifty-seven out of eighty-

* Read in opening a discussion at a combined meeting of the Sections of Obstetrics and Gynaecology and Public Health at the Annual Meeting of the British Medical Association, Bournemouth, 1934.

TABLE III.—*Maternal Mortality Inquiry : Causes of Death*

Year	Intercurrent Disease			Abortions			Sepsis			Toxaemia			Other Causes
	No.	Ante-natal Care		No.	Interference	Probable Interference	No.	Deaths Due to Failure of Ante-natal Care	Ante-natal Care None or Insufficient	No.	Ante-natal Care		
		None	Insufficient								None	Insufficient	No.
1929... ..	30	9	15	15	5	5	19	2	18	23	5	14	6
1930... ..	20	4	7	15	5	2	17	10	11	17	1	14	10
1931... ..	21	4	9	9	3	2	21	4	14	18	3	7	11
1932... ..	9	0	4	9	2	2	26	1	10	17	1	10	15
1933... ..	7	3	2	14	4	5	15	2	8	13	2	7	19
Total ...	17	20	37	62	19	16	98	19	61	88	12	52	61

Total deaths = 396.

seven women had not received adequate ante-natal care. In fatal abortions thirty-five out of sixty-two were probably associated with "interference." In nineteen of the ninety-eight deaths from sepsis ante-natal care had failed to give the help that should have been given, and in sixty-one it was insufficient. In the toxaemias no fewer than sixty-four out of the eighty-eight cases had had too little ante-natal care or none at all. In the group collected as "other causes," including ectopic gestation, Caesarean section, etc., no assessment has been attempted. The general inference to be drawn from these figures is that in a large proportion of cases, while death could not directly be considered as due to failure of ante-natal care, there was no doubt that the standard and amount was altogether insufficient for the minimum of efficiency.

Findings in a Maternity Home

I have endeavoured to show, then, that if ante-natal care has not succeeded in lowering maternal mortality in Birmingham it has not had a fair chance of doing so. In the history of the fatal cases its absence or insufficiency is prominent. The consideration of what happens where the standard is satisfactory is worth studying in contrast, and for this reason the findings at one of the city maternity homes are recorded.

The ante-natal work in this home is of the highest standard, and the women are required to submit to every requirement of the medical officer, or their "booking" is cancelled. Therefore it can be taken that the results reflect the best that intensive ante-natal care can secure. The only selection from the medical point of view is that Caesarean section cases are not booked, and that inevitable early inductions are excluded. The figures have been taken from 1,000 consecutive booked cases delivered in the home, of which 56 per cent. were primiparae and 44 per cent. were multiparae. Seven hundred and thirty-nine patients, or 74 per cent., were normal throughout pregnancy and confinement, and the remaining 261, or 26 per cent., were admitted for treatment to the ante-natal ward. Some of the conditions found, such as heart disease, pyelitis, and toxaemia, required prolonged treatment.

We have here a very low maternal mortality rate, 1 per 1,000, which was the same as in the previous 1,000 cases delivered in this home, but it must be remembered that abortions, intercurrent disease, and the group classed as "other causes"—that is, ectopics, etc.—are excluded. The stillbirth rate remains practically unaffected as compared with the city as a whole. The neo-natal mortality is improved, but this is undoubtedly due to intensive and highly skilled care of the premature infants, the proportion of which is increased by the frequent inductions. The city neo-natal mortality for the first fortnight of life is

TABLE IV.—*City Maternity Home (1,000 Consecutive Booked Cases)*

(Primiparae = 56 per cent. Multiparae = 44 per cent.)

Normal throughout, 739 = 74 per cent.

Complications of pregnancy—admitted to ante-natal ward, 261 = 26 per cent.

Maternal mortality = 1 per 1,000.

Stillbirth rate = 3.3 per cent.

Neo-natal mortality = 1.6 per cent.

Complications	No. of Cases	Results	
		Mother	Baby
Heart disease	18	Good	Good
Hyperthyroidism	4	"	"
Chorea of pregnancy	2	"	"
Severe varicose veins	5	"	"
Profuse vaginal discharge (not V.D.)	3	"	"
Threatened premature labour	17	"	1 premature stillbirth; others good
Placenta praevia—central ...	4	"	All stillbirths
" " lateral	6	"	Good
Ante-partum haemorrhage (other than toxaemia or placenta praevia)	18	"	"
Breech in primiparae for version	11	"	1 stillbirth; others good
Pyelitis (3 + toxaemia)	31	8 still had pus at 14th day	1 stillbirth; others good
Slight disproportion or post-maturity (for induction)	30	28 normal delivery, 2 forceps	3 stillbirths; others good
Hydramnios	1	Good	Good
Diabetes and toxaemia	1	"	"
Dysentery	1	"	"
Red degeneration of fibroid ...	1	"	"
Toxaemia of pregnancy (with albumin)	108	1 died (obstetric shock after twins), 1 mania; 12 still had albumin at 14 days; 94 had no albumin at 14 days	9 stillbirths; 4 died later. Others good
Total	261	—	—

28.3 per 1,000 births in comparison with 17 per 1,000 births in the home. At the same time, no one can study this table without realizing the importance of ante-natal examination and treatment from the point of view of the 26 per cent. abnormal cases.

Present Position Reviewed

It seems clear from the conditions found that not only is ante-natal care essential, but also that the obstetrician making himself responsible for it should be as much a physician as a surgeon. The tendency to combine obstetrics and gynaecology has led to the importance of the physician's point of view in the care of the expectant mother being overlooked to some extent. If that happens ante-natal diagnosis and treatment will never be satisfactory. A great deal is heard of the importance of the

ante-natal clinician knowing what happens at the confinement, but it is even more important for him to recognize what is happening to the patient before the confinement. Until ante-natal care includes the careful study of the patient as a whole and throughout pregnancy it will be impossible to say that we are satisfied with the results it gives.

At present one is far from satisfied, but that simply means one remains dissatisfied with the amount and standard of ante-natal care. As far as can be judged, where the standard is satisfactory, one can hope to obtain a marked decrease in maternal morbidity, with an incalculable improvement in the health of the mothers, and a definite reduction in maternal mortality when combined with really skilled obstetrics. The effect on the stillbirths and neo-natal deaths remains in doubt. Fewer cranial injuries, certainly, but probably more premature babies from inductions, may result. This suggests that skilled and prolonged treatment and care of the infant is essential, and ante-natal care may benefit the mother even more than the child.

At the same time not ante-natal care alone, but all the influences at work to raise the health standard of the nation must benefit women and ultimately their infants. With the disappearance of rickets, and with better nutritional standards for children and adolescents, pregnancy and childbirth should become less dangerous to both mother and child. Among the helpful factors is the universal realization of the importance of prevention and the value of careful medical supervision during pregnancy. There are factors, however, which delay progress, and among these the inadequate training of the medical student and midwife in all that concerns obstetrics and infant care is the most serious. While there has been great progress in recent years, this has not gone far enough, and there can be little doubt that the best use is not being made of the available teaching material. The teachers are frequently too few, and only too often overworked. Expediency and improvisation are still advocated before efficiency. Ante-natal care will not fail to give satisfactory results when knowledge, careful observation, and unceasing vigilance are used to benefit every expectant mother.

The final position of the ante-natal clinic at the child welfare centre is problematical. It is generally agreed that the routine care of the pregnant woman should be in the hands of those who will attend her during labour. Whether the present tendency to enter institutions will go further, or whether the district midwife and the general practitioner will retain their present predominance in this field, remains to be seen. In either case, with the progress of medical education and the better training of midwives, the position of the clinics must alter. They may become consulting clinics, or they may serve as outlying clinics for central institutions. Their present role is that of pioneers, and their task predominantly educational. While the position to-day is not altogether satisfactory, we can say of ante-natal work, in the well-known phrase, that it is progressing as well as can be expected!

The Child Guidance Unit at the West End Hospital for Nervous Diseases (73, Welbeck Street, W.1) began work in October, 1932, and a report for the year 1933 by the honorary director (Dr. Emanuel Miller) has lately been issued. The special feature of this unit is that it is established in a voluntary hospital, and makes provision for in-patient observation and treatment, as well as for sessions held in special quarters in the out-patient department. All cases are seen in the first instance by a neurologist on the staff of the hospital, thus eliminating organic diseases and other unsuitable cases.

ARE WE SATISFIED WITH THE RESULTS OF ANTE-NATAL CARE? *

BY

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Ante-natal care was begun in this country about the beginning of the present century. It is now generally accepted as an integral part of the care of maternity, but no standard is yet in universal operation. The Maternity and Child Welfare Act was passed in 1918, and since that time ante-natal work has considerably expanded. Nevertheless, the general maternal mortality rate per 1,000 live births does not show any material change since that date. Maternal mortality is in part due to lack of ante-natal care, and the absence of any fall in the rate probably means that the ante-natal care given in many places is still insufficient.

Ante-natal care has the following objectives: (1) to maintain the health of the pregnant woman; (2) to secure delivery with the least possible disturbance to the pregnant woman; (3) to secure the birth of a healthy child at full time; and (4) to secure for the child an adequate supply of breast-milk during the normal period of lactation. The questions that arise are: (1) how can we secure these objectives; and (2) to what extent do the methods generally in use fall short of the best? Ante-natal care, so far as the mother is concerned, includes the problem of the maintenance of her general health and nutrition, and her obstetric state.

Attention to the general health and nutrition of the mother involves a knowledge of her home surroundings, food, habits, work, and recreation, as well as a careful and systematic physical examination. These two factors—namely, the environment of the patient and her general physique—have to be carefully correlated, and advice should be given by a medical practitioner competent to do so as to any measures, social or medical, which are necessary to improve the patient's general hygiene. The home environment should be reported not only by the patient but also by a health visitor. In order that the doctor may be in a position to safeguard, and to improve if necessary, the mother's health, one consultation during pregnancy is not enough. This supervision should be carried out at regular intervals at appointed times. The failure of the mother to attend on any specified occasion should be followed up immediately by an inquiry at the home as to the reason for her non-attendance. This provision for ante-natal care is important, since it is not infrequently the case that the pregnant woman has failed to keep her appointment on account of her physical condition, which may urgently require treatment.

Ante-natal Work and Subsequent Confinement

The next point that arises concerns the obstetric state of the patient. A special physical examination of the mother is required to ascertain the condition. The Ministry of Health, in its regulations of 1930, has laid down that medical officers in charge of ante-natal clinics are required to possess special experience in practical midwifery and ante-natal work. The importance of the association of practical midwifery with ante-natal work is thus recognized, and I am convinced that, if the best results are to be obtained from these obstetrical examinations, they must be linked up with the subsequent confinement. It is impossible for an ante-natal medical officer

* Read in opening a discussion at a combined meeting of the Sections of Obstetrics and Gynaecology and Public Health at the Annual Meeting of the British Medical Association, Bournemouth, 1934.