

## Some Modern Maternity Hospitals, with Plans.

### II.

#### Birmingham Maternity Hospital.

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THIS Charity under the title of "The Birmingham Lying-in Hospital and Dispensary for the diseases of Women and Children for Birmingham and the Midland Counties," was founded in 1842. The premises in which the work was first carried on were at 21 Whittall Street, St. Mary's Square. After nine months the hospital was established in Broad Street.

The objects of the Institution were set out in the Laws and Report of the first Annual Meeting, and they comprised the following:—

1st. To supply proper medical and obstetric attendance upon poor married women at their confinements, either in their own homes or within the wards of the Hospital. In the report we find it stated: "The experience of the past year (1842-1843) has revealed a mass of evidence of the distress of multitudes of poor married women, who are destitute of the most ordinary and necessary attentions and comforts during confinement. The painful conviction is forced upon them that cases of permanent injury and suffering, and even of premature death, are not uncommon in the town, from causes which may be entirely removed by dispensing the benefits of the Charity."

2nd. To afford medical relief in the diseases incident to women and children.

3rd. To give obstetric training to medical students, for we read in this same report: "The larger sphere of usefulness is aimed at in the matter of the educational advantages which such an Institution as this might offer. It is essential that every moral, physical and intellectual qualification should be brought to bear on subjects so vitally important to the welfare of society, and that every possible facility for the proper training of practitioners in obstetric medicine should be afforded. The benefits of such institutions as these do not terminate with the poor. In the educational point of view they are invaluable to the community at large. They impart knowledge, experience and dexterity to the practitioners, and opportunities of observing the action of remedies and the progress of diseases which cannot be obtained in private practice."

In-pupils were admitted to attend labours under the supervision

of the Medical Officers, and the minimum period of attendance upon the obstetric practice in the Charity was three months. Lectures to pupils were delivered by the Medical Officers. A Museum of obstetric specimens was attached to the Hospital and was under the care of the Resident Surgeon.

4th. Among the other objects we find the Committee stating in this report: "That the children of the poor generally may be vaccinated gratuitously, every Thursday morning, at eight o'clock, under the direction of the Medical Officers, and that the children of all patients of the Hospital shall be vaccinated at the Hospital within two months after their birth; and if this rule be not complied with the offending patient shall be ineligible to receive a second time the benefits of the institution."

It is not a little interesting in the present day to read of this attempt on the part of the Committee to bring the patients attending the Charity into line with their firm belief in the efficacy of vaccination. This law was omitted in 1847. The Hospital was managed by a Quarterly Board, which met at the beginning of each quarter. This body consisted of Patrons, President, Vice-President, Treasurers, Secretaries, Trustees and twelve or more Governors, of whom five formed a quorum. The Medical Officers were *ex-officio* members of the Board. The Board met to audit and settle accounts and receive the reports of the Weekly Board, the Ladies' Committee, the Ladies' Association, and the reports of the Treasurer and Collector. The Weekly Board, consisting of not fewer than seven members of the Quarterly Board met each week; its duties were to superintend the general and domestic arrangements of the Hospital, and also to act as a Committee of Finance.

At first there were two Honorary Medical Officers. Afterwards a Resident-Surgeon was appointed, in addition, to attend to outdoor midwifery and sick patients and to superintend pupils. In 1853 we find that three Medical Officers and three Resident-Surgeons were appointed and also a Resident Superintendent, whose duties were to take charge of the establishment, dispense the medicines required, and see that the Resident-Surgeons were regular and punctual in the performance of their duties; he was also to be an *Accoucheur* competent to attend a midwifery case in the absence of a Resident-Surgeon or an Honorary Medical Officer. The Honorary Medical Officers attended at the Hospital at first three days a week, and afterwards they attended daily and in rotation to prescribe for the out-door patients. They took charge of the in-door patients, and they visited the out-door patients at their own homes in their respective districts when requested to do so by the Resident-Surgeons, and at all other times at their own discretion. The Resident-Surgeons attended the out-door midwifery and such sick patients as required to be visited

at their own homes. They also took charge of the in-door patients in the absence of the Honorary Medical Officers.

The boundaries of the Charity for the purposes of medical visitation were co-terminous with the boundaries of the Borough of Birmingham, but in-door patients attending the Hospital were eligible irrespective of their place of residence. Relief was given through the medium of subscribers' tickets.

In 1861 efforts were made to provide improved accommodation in this Lying-in Hospital, with the result that two wings were added containing four wards with thirteen beds in all. The cost was upwards of £1,400, and the addition was completed in 1863. The Broad Street Hospital was situate about half-a-mile from the centre of the town. The building, standing well back from the roadway, still remains, and has been used for some years as a Children's Hospital. It consists of a central block with an imposing and well-proportioned brick front and two wings. The Hospital, as before mentioned, had room for thirteen patients in four wards, besides which there was accommodation for the resident staff of Surgeons and Nurses. During the existence of the Hospital (which lasted twenty-five years), 23,471 midwifery cases were attended and about 5.6 per cent. of these, or 1,350, were in-patients. The mortality during this whole period cannot be computed as the statistics are incomplete. However, during the four years including the years 1864 to 1867 there were 281 midwifery in-patients with one death.

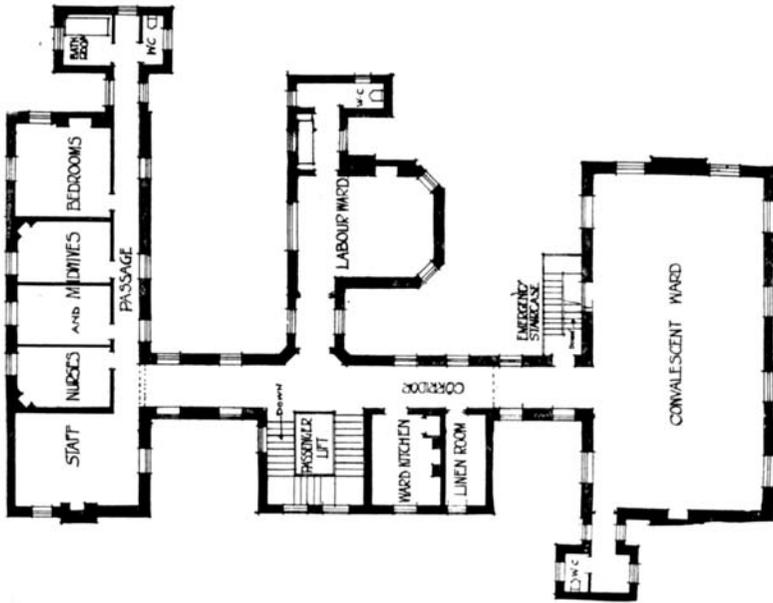
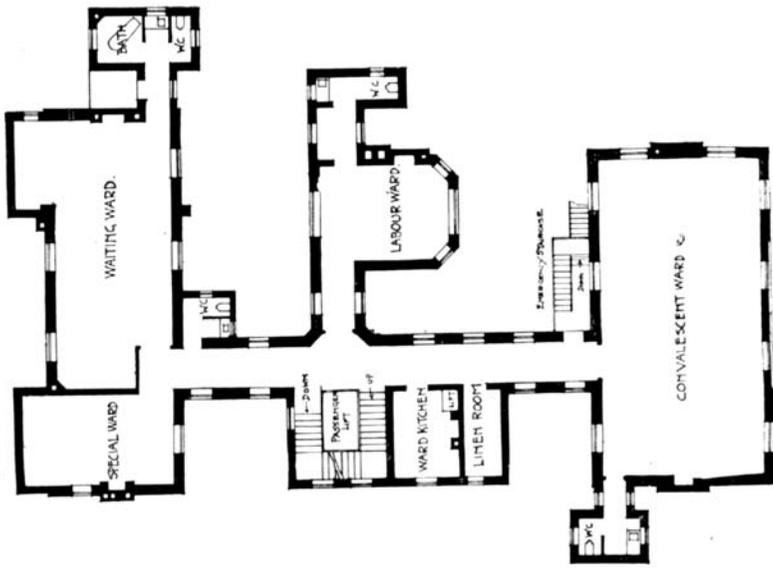
PERIOD FROM 1866 TO THE CLOSING OF THE HOSPITAL ON  
JANUARY 1ST, 1868.

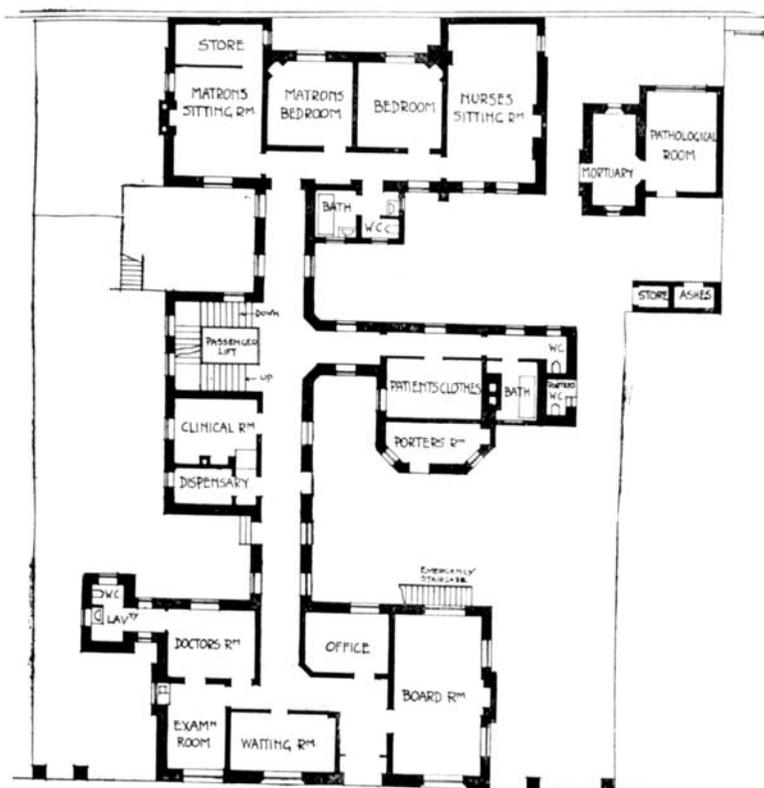
In 1866 important changes in the constitution and the administration of the Charity were proposed, and these were carried into effect in 1868. It may be of interest to study some of the reasons which led the management of the Charity to make these alterations. It may be said that the current opinion of the day, which was founded on the statistics of Hospital mortality, condemned all in-patient treatment of midwifery cases on account of the large number of deaths from puerperal fever. Taking the average of ten years, the proportion of deaths in childbed from accidents connected with delivery and from puerperal fever throughout England and Wales was about 1 in 225 cases; in the practice of charities where women were attended at their own homes by officers from those institutions the mortality was rather less, but in Maternity Hospitals the mortality was terrible. Statistics based on the experience of Lying-in Hospitals in this country, in Scotland, in Ireland, and on the Continent showed that the deaths varied from 1 in 70 to as many as 1 in 25. The principle therefore was established that the aggregation of maternity patients in an institution was wrong on account

of the liability to puerperal infection. It seems that from the time that the two wings of the Birmingham Lying-in Hospital had been added to the end of 1867—that is during a period of four years,—the total number of patients received into the Hospital had been 421, 281 being midwifery and 140 sick cases. Of these, one midwifery and four sick patients died. The maternal mortality of the midwifery cases was thus 1 in 281. The usual objections, therefore, of overcrowding and unnecessary mortality did not apply in this case; the building was satisfactory, the space allowed to each bed ample, the beds were not fully occupied, and the percentage of mortality, as we have already seen, was wonderfully low. Still, it was thought advisable to pursue the safer course of treatment by home attendance exclusively rather than incur the risk of an epidemic of puerperal fever. It was made out at the time that most of the cases admitted into the hospital were of the ordinary type and, from a medical point of view, might have been as well treated at home as in the hospital. The system, too, was expensive, the cost of every occupant of a bed being out of all proportion to that spent on the treatment of patients in their own homes. The London Maternity Charity stood out among all other institutions of the kind both for its low rate of maternal mortality and also for its economy in working. This London Charity carried out its work by the home attendance on the patients by midwives under the superintendence of Medical Officers.

The Committee of the Birmingham Charity, after much consideration and discussion, considered that they could not do better than follow on the same lines, and they determined to adopt a similar plan of working. At the annual meeting of the Hospital, held in November 1867, resolutions were passed abolishing the in-patient department, restricting the operations of the Charity to midwifery cases alone, and adopting experimentally the employment of trained and certified midwives. It was resolved to change the name of the Charity to the "Birmingham Lying-in Charity," and to dispose of the Hospital building in Broad Street, the cost and possible danger of maintaining the Hospital as an In-patient Institution for sick women being considered too great. It may here be mentioned that as a result of the Lying-in Hospital being closed to sick women a movement was shortly afterwards started to found a separate Hospital for Women in Birmingham, which since its initiation in 1871 has acquired an almost world-wide reputation for its record in abdominal surgery.

Looking back on the events of these few years when the profession and the public began to realize the awful results which obtained in almost all in-door maternity hospitals, and when no means were known by which puerperal fever could be safely and surely stamped out, one cannot help admiring those who had the moral courage to act and act deliberately in order to stay the extension of this fright-





ful disease. One fact was quite clear and that was that while home service on maternity cases was attended by a small rate of mortality, the aggregation of cases, for in-door treatment, within the walls of a hospital became as often as not a veritable death trap. By the writings and investigations of Miss Florence Nightingale, Dr. Farr, and Sir James Simpson, and before them of Semmelweis and Oliver Wendell Holmes, some part of the whole truth about the communicability of puerperal fever began to be known, and the only way of staying the spread of the disease appeared to be to close the hospitals. This, at least, is what was done in Birmingham.

PERIOD FROM 1868 TO 1907 INCLUSIVE, DURING WHICH THE WORK WAS CARRIED ON BY MIDWIVES AT THE HOMES OF PATIENTS.

As has just been mentioned a complete change came over the Institution at the beginning of 1868. The alterations now began to be carried into effect. The rules were remodelled in accordance with those in force at the London Maternity Charity. First one midwife was engaged in April 1868, then a second, and later there were four midwives at work in the four districts into which the town was for the purpose divided. The Honorary Medical Officers carried out the duties of District Surgeons, superintending the work of the midwives and visiting at the request of the latter all cases of difficulty or danger. The sick cases which had previously been attended by the Resident-Surgeons were transferred to the Birmingham General Dispensary. The premises of the Charity now consisted of a small room, at No. 7, Newhall Street, for the duties of the Secretary.

There can be no question that the work carried out by the Charity on this altered basis was eminently satisfactory. In 1878 Dr. Farr makes special mention of the work of the Charity in the 39th Annual Report of the Registrar-General, and since that time the mortality rate has progressively lessened. Dr. Farr says: "4610 mothers died in childbed annually, in 5 years, 1872—76. . . . I must here notice two remarkable Institutions that will answer the question: What number of these lives have we every reason to believe would have been saved, had all been watched over by skilful midwives acting under skilful physicians?"

"1. *The Royal Maternity Charity of London, founded in 1757.* The deaths of Mothers to 9,019 delivered by this Charity in 3 years 1875-6-7 were 21, being at the rate of 2·33 to 1,000 deliveries.

"2. *The Birmingham Lying-in Charity . . .* 8,607 Mothers were delivered in 10 years at the rate of 2·32 deaths to 1,000 Mothers, or nearly as possible the same as the London Maternity Charity.

"At the rate of mortality among the patients of these two charities the annual deaths by childbirth in England and Wales would have been 2,009. The actual deaths registered were 4,610, so

that 2,601 Mothers perish annually through want of such amount of care and skill as the midwives acting under the consulting physicians of the two charities of London and Birmingham bring to bear in their attendance."

The total number of cases attended by the Charity during the last 39 years—1868 to 1906 inclusive—under the system of home attendance by midwives has been 36,705, out of this number there have been 75 deaths of mothers, giving a maternal mortality of 2 per 1,000, or one death in 489 deliveries. These figures refer to deaths occurring for the most part in the first ten days, and they include deaths due to puerperal sepsis and to accidents in labour.

The statistics of the Charity for the last 20 years, divided into periods of 5 years, may be seen in the following table.

DEATH RATE PER 1,000 DELIVERIES.

Periods of five years	Total Cases attended	Total Deaths per 1000	Septic Deaths per 1000	Accidents of Childbirth per 1000
1887—1891	... 4245	... 2·1	... —	... 2·1
1892—1896	... 4180	... 1·8	... —	... 1·8
1897—1901	... 4200	... 2·64	... 0·45	... 2·18
1902—1906	... 6181	... 1·06	... 0·27	... 0·78

It must be understood that these figures are the records of the cases attended in many of the years only up to the tenth day after delivery, and therefore in comparing them with others this fact must be taken into account.

The district work has increased during the last few years to such an extent that at the present time seven midwives are employed in seven districts of the city. Last year, 1906, 1454 cases were attended. The district work is inspected by a Lady Superintendent, who is a Teacher Midwife recognized as such by the Central Midwives Board.

In 1904, in place of the usual ticket system, a registration fee of 2s. 6d. was substituted. It was felt that a small charge encouraged thrift and a proper sense of individual responsibility, and at the same time could not be in any way regarded as a payment for services rendered, and further it could not be said to compete with the lowest fee asked for in the cheapest class of private practice.

Care is taken through a Committee of Investigation that no abuse is made of it by patients availing themselves of the benefits of the Charity who could otherwise afford the services of a Doctor or Midwife. The charge is remitted in necessitous cases. The system has been in force for over three years and has worked well.

THE ESTABLISHMENT OF THE BIRMINGHAM MATERNITY HOSPITAL.

The need for a Maternity Hospital in Birmingham where practical teaching might be given to medical students and midwifery nurses began to be felt about 1897. Sometime before this date it had been shown that puerperal fever had been stamped out of our Maternity Hospitals, and for many years now it has been proved that all Lying-in Charities which were served by midwives in out-door attendance, presented abundant evidence of their work being carried on with a decreasing mortality, yet from the returns of the Registrar-General the puerperal fever mortality throughout the whole country has continued as great as, if not slightly greater than, it was 20 years ago. Drs. Boxall, Cullingworth, Dakin, Williams and others, in papers on this subject, have pointed out that the puerperal fever mortality has not diminished during the last two decades, and that it accounts for upwards of 40 per cent. of the total childbed mortality. They have also shown that the deaths due to accidents of childbirth have actually decreased during the same period. In the face of this, it must be openly admitted that the death-rate in private practice has not only not improved but has if anything become worse—and this in spite of the improvements which have taken place in the two departments of midwifery practice mentioned above. Carelessness and ignorance in the aseptic technique undoubtedly account for this lamentable loss of so many valuable lives, and all for the want of proper means of training.

The local needs for the teaching and training of midwives in Birmingham are great. In the Medical Officer of Health's Report for the year 1906, as many as 197 or 90 per cent. of the midwives practising in the city are mentioned as having had no training and as possessing no certificate of having passed an examination. The figures of Dr. Robertson in this report, which are extracted from returns made by him to the Central Midwives Board, show at once the very large number of untrained midwives that are carrying on their practice in Birmingham, and how unfavourably our city compares with most of the other large centres.

	Number of Midwives	Percentage of Untrained Midwives
London ... ..	1824	10
Liverpool ... ..	353	12
Manchester ... ..	142	35
Birmingham ... ..	219	90
Sheffield ... ..	133	59
Leeds ... ..	81	93
Bristol ... ..	80	72
Bradford ... ..	49	91

Dr. Robertson says :—

“ Of this number of 197 who reside in the city no less than 57 are unable to read or write. Many of the midwives are old women who cannot continue in practice for many years longer. The supply of trained substitutes during the next five or ten years will have to be considerable. The number of midwives of varying ages is shown below :—

	Number of Midwives
Over 70 years ... ..	14
Between 60 and 70 years... ..	27
Between 50 and 60 years... ..	77
Between 40 and 50 years... ..	44
Under 40 years... ..	29

From these two tables it is only too obvious that a school for midwives is urgently needed to supply a new generation of young and intelligent midwives to fill up the ranks of those who must inevitably disappear, for the shortage will only too soon be felt.”

After the passing of the Midwives Act of 1902 by which the Legislature, through the Central Midwives Board, requires that in future all midwives shall be qualified by proper training and examination, it became necessary that means should be found in Birmingham to comply with the regulations of this Board. As the law did not in any way arrange to make provision for the efficient teaching of pupil midwives, the onus of providing means that would satisfy these needs has fallen on the charitable public here as elsewhere.

Since the closing of the Hospital in connexion with the Birmingham Charity in 1868 there have been no beds in Birmingham specially set apart for obstetric complications, and with the increasing population a few beds have for some time been felt to be much needed for the treatment of some of the more difficult cases of labour, treatment such as can only be obtained within a hospital and with special nursing. For these reasons an appeal was made to the public for money to build a Hospital in the centre of Birmingham. Through the untiring efforts of the Committee, especially of the lady members, this appeal met with a warm response, and the new Maternity Hospital is now an accomplished fact.

A central site for the purpose was purchased in Loveday Street \* in 1903, and an additional area adjoining was added in 1905 by the generous gift of a member of the Board. The foundation stone was laid on the 14th July, 1906, and now, sixteen months later, the

\* It is a curious coincidence that the site of the new Maternity Hospital is exactly opposite (across St. Mary's Square) to the original premises of the Birmingham Lying-in Hospital, which was founded in 1842.

Hospital has been completed. The opening ceremony took place on the 20th November, 1907.

The building, which is in the Georgian style, is well constructed. It is divided into three blocks connected by a central corridor. The first block, next Loveday Street, contains on the ground floor the Office, Board-room, Patients' Waiting-room and a Doctor's Consulting room with an examination-room adjoining. The central block contains the staircase, lift, dispensary, clinical laboratory, clothes storage-room, and a bath-room for incoming patients. The furthest block contains the Matron's sitting-room, two bedrooms, and the Nurses' sitting-room.

The first floor of the three blocks contains a waiting ward for 6 patients, having 1,433 cubic feet of air space for each patient, another ward with two beds for cases requiring special observation and treatment, a labour ward having 3,100 cubic feet of air space, a ward kitchen, a linen store, and a convalescent ward for 8 beds with 1,672 cubic feet of air space for each.

On the second floor there are labour and convalescent wards similar to those on the first floor, and also bed-rooms for the staff nurses and pupil midwives.

There is an Isolation ward in the central block on the third floor, approached by a bridge from the main corridor. The staff's dining-room, the servants' dining-room, the kitchen, and bed-rooms for servants are situated on the third floor, while in the basement there are the heating apparatus, the sterilizing-room and a fully equipped hand-power laundry.

There are also provided a Mortuary Chapel and a post mortem room. The Hospital, therefore, has accommodation for 24 beds, exclusive of the two labour wards and the isolation ward, and this number of beds will suffice, it is thought, for the treatment of at least 300 cases a year.

The building has been designed and carried out under the direction of the Architects, Messrs. Cossins, Peacock and Bewlay, of Birmingham. The total cost has been £16,250, including £2,850 for the land, £11,900 for the building and special fittings, and £1,500 for the furniture and surgical equipment.

The response made to the appeal for funds has been so good that the Hospital has been opened free from debt. The annual expenditure, however, will be much larger than formerly, so it will be necessary for the annual subscriptions, which this year amounted to about £420, to be increased to £1,200.

A Medical Staff has been appointed to perform the duties of the Hospital, and it is composed of two In-patient Physicians and two Out-patient Physicians. The former are charged with the entire control of the treatment of the patients in the hospital, taking duty in turn, and they must attend any out-door cases to which they are

summoned by the District Medical Officers. In case of their being unable to attend, their duties devolve upon the Physicians for Out-patients then on duty. The Out-patient Physicians superintend the Midwives of the central districts of the city.

The opening of the Hospital for the reception of patients will signalize the commencement of systematic clinical instruction in midwifery for medical students so as to form part of the medical curriculum in accordance with the new regulations of the General Medical Council. The University of Birmingham has already taken steps to arrange with the Maternity Hospital for the fitting in of the clinical instruction between the systematic course of lectures and the out-door attendance on the prescribed twenty cases of labour. The clinical instruction will necessitate regular daily attendance upon the in-door practice of the Maternity Hospital during one month, and the conduct of cases of labour under the personal supervision of a Medical Officer of the Institution. The out-door cases will continue to be attended in the Queen's Hospital Maternity Charity as in the past, but women students will be able to carry out the whole of their practical midwifery in the Lying-in Charity under a new rule.