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978-1-108-05319-8 - Introductory Notes on Lying-In Institutions: Together with a  
Proposal for Organising an Institution for Training Midwives and Midwifery Nurses  
Florence Nightingale

Excerpt

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# NOTES

ON

## LYING-IN INSTITUTIONS.



THE FIRST STEP to be taken in the discussion is to enquire, What is the real normal death-rate of lying-in women? And, having ascertained this to the extent which existing data may enable us to do, we must compare this death-rate with the rates occurring in establishments into which parturition cases are received in numbers. We have then to classify the causes of death, so far as we can, from the data, with the view of ascertaining whether any particular cause of death predominates in lying-in institutions; and, if so, why so? And finally, seeing that everybody must be born, that every birth in civilised countries is as a rule attended by somebody, and ought to be by a skilled attendant; since, therefore, the attendance upon lying-in women is the widest practice in the world, and these attendants should be trained; we must decide the great question as to whether a training-school for midwifery nurses can be safely conducted in any

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## NOTES ON LYING-IN INSTITUTIONS.

building receiving a number of parturition cases, or whether such nurses must be only trained at the bedside in the patient's own home, with far more difficulty and far less chance of success.

*MIDWIFERY STATISTICS.*

It must be admitted, at the very outset of this enquiry, that midwifery statistics are in an unsatisfactory condition. To say the least of it, there has been as much discussion regarding mortality and its causes among lying-in women as there has been regarding the mortality due to hospitals. Yet there appears to have been no uniform system of record of deaths, or of the causes of death, in many institutions, and no common agreement as to the period after delivery within which deaths should be counted as due to the puerperal condition. Many of the most important institutions in Europe merely record the deaths occurring during the period women are in hospital, and they appear not unfrequently to do this without any reference to the causes. Similar defects are obvious enough in the records of home deliveries; and hence it follows that the mass of statistics which have been accumulated regarding home and hospital deliveries, admit of comparison only in one element, namely, the total deaths to total deliveries, and this only approximately.

Dr. Matthews Duncan, in his recent work on the 'Mortality of Childbed and Maternity Hospitals,' has dwelt forcibly on these defects in midwifery statistics, and has made out a

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## MIDWIFERY STATISTICS.

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strong case for improvement in records. But, as will be afterwards shown, with all their defects, midwifery statistics point to one truth ; namely, that there is a large amount of preventible mortality in midwifery practice, and that, as a general rule, the mortality is far, far greater in lying-in hospitals than among women lying-in at home.

There are several of what may be called secondary influences also, which must affect to a certain extent the results of comparison of death-rates among different groups of lying-in cases. Such are the ages of women, the number of the pregnancy, the duration of labour, and the like. It is impossible, in the present state of our information, to attribute to each, or all of these, their due influence ; neither, if we could do so, would it materially affect the general result just stated. But it is otherwise with another class of conditions, of which statistics take no cognizance. Such are the general sanitary state of hospitals, wards, houses, and rooms where deliveries take place ; the management adopted ; the classes of patients ; their state of health and stamina before delivery ; the time they are kept in midwifery wards before and after delivery. These elements are directly connected with the questions at issue, and yet our information regarding them is by no means so full as we could wish—indeed is almost nothing.

Our only resource at present is to deal with such statistical information as we possess, and to ascertain fairly what it tells us. This we shall now endeavour to do, beginning with an estimate of the normal mortality due to childbirth in various European countries.

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[More information](#)*NORMAL DEATH-RATE OF LYING-IN WOMEN IN ENGLAND.*

In the Registrar-General's Thirtieth Annual Report, 1867, there is an instructive series of tables, giving approximately the present normal death-rate among lying-in women in England.

One of these tables (abstracted on Table I.) shows that, including deliveries in lying-in hospitals, there were in England, during the year 1867, 768,349 births, and that 3,933 women died in childbed. This gives an approximate total mortality of 5·1 per 1,000 from all causes.

TABLE I.—*Mortality after Childbirth in England, 1867*  
(*Registrar-General's Thirtieth Annual Report*).

Total Births	Deaths from Accidents in Childbirth	Deaths from Puerperal Diseases	Deaths from Miasmatic Diseases	Deaths from Consumption and Chest Diseases	Deaths from all Other Causes	Total Deaths
768,349	2,346	1,066	137	230	154	3,933

The causes of mortality are also given in Table I. as follows:—

1. There were 2,346 deaths by accidents of childbirth (hæmorrhage, convulsions, exhaustion, mania, &c.).

2. There were 1,066 deaths due to puerperal diseases (puerperal fever, puerperal peritonitis, metritis, pyæmia, &c.).

3. Of the remaining 521 deaths, 137 were due to non-puerperal fevers and eruptive fevers; 230 were occasioned

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## NORMAL DEATH RATE.

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by consumption and other chest diseases, and 154 by other causes.

4. By adding together deaths from puerperal diseases and those from fevers, we find that, out of a total mortality of 3,933, the deaths from diseases more or less connected with what is called 'blood-poisoning' amounted to 1,203, or rather more than 30 per cent. of the total mortality.

5. The mortality per 1,000 deliveries (or rather per 1,000 births) from each class of causes in England, in 1867, stands thus :—

Accidents of childbirth . . . . .	3	per 1,000
Puerperal diseases . . . . .	1.4	„ „
Others, including non-puerperal fevers . . . . .	.7	„ „
Total . . . . .	5.1	„ „

The same Report gives the following puerperal death-rates for all England during 13 years, 1855 to 1867 (see Table II.).

Accidents of childbirth . . . . .	3.22	per 1,000
Puerperal diseases . . . . .	1.61	„ „
Total, exclusive of other deaths . . . . .	4.83	„ „

An important element in the analysis of these death-rates is their relative prevalence in town and country. This is abstracted on Table II. from the Registrar-General's Report for a period of ten years, as follows :—

*Deaths from Accidents of Childbirth and Puerperal Diseases.*

England, 64 healthy districts, 312,402 deliveries . . . . .	4.3	per 1000
Ditto, 11 large towns, 1,402,304 deliveries . . . . .	4.9	„ „

In other words, out of every 5,000 deliveries in towns there are three more deaths from accidents of childbirth and

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puerperal diseases than occur among the same number of deliveries in healthy districts.

These facts, with a small deduction for the higher death-rates in lying-in hospitals, give the present mortality in English homes. They appear to show that puerperal women are subject to something of the same law of increase of death-rates in towns as other people, but part of the increase is no doubt due to the higher death-rates in delivery-wards in these towns. The facts also appear to indicate a probable reduction of death-rates among lying-in women in England, from the extension of public health improvements both in town and country.

TABLE II.—*Table Showing the Mortality per Thousand after Delivery from Puerperal Diseases and Accidents of Childbirth.*

Places	Mortality Per Thousand Deliveries		
	Puerperal Diseases	Accidents of Childbirth	Puerperal Diseases and Accidents of Childbirth
King's College lying-in ward, 5 years.	29.4	0	29.4
1861	—	—	75.2
12 Parisian Hospitals 1862 {	—	—	56.7
1863 {	—	—	60.6
Queen Charlotte's Lying-in Hospital, 40 years	14.3	5.3	19.6
27 London workhouses, in which both deliveries and deaths have taken place	4.1	2.1	6.2
40 London workhouses, including those without deaths, 5 years	3.3	1.7	5.0
Liverpool Workhouse lying-in wards, 13 years	3.4	2.2	5.6
All England, 13 years	1.61	3.22	4.83
Ditto, 64 healthy districts (312,402 deliveries), 10 years	—	—	4.3
Ditto, 11 large towns (1,402,304 deliveries), 10 years	—	—	4.9
8 military lying-in hospitals, 2 to 12 years	3.9	3.4	7.3

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## NORMAL MORTALITY IN DIFFERENT COUNTRIES. 7

*NORMAL MORTALITY AMONG LYING-IN WOMEN IN  
DIFFERENT COUNTRIES.*

The next step in the enquiry is to ascertain, so far as it may be possible to do so, what is the death-rate among lying-in women delivered at their own homes in different European countries. Besides the mortality statistics for healthy districts in England, already given, the only available data for this information are reports of public institutes having outdoor midwifery practice, and any records of private practice which may have been published. In adducing these data, however, it is necessary to do so with the reservation already made that their accuracy is only approximate.

The most extensive series of data of this class is given by Dr. Le Fort in his able treatise 'Des Maternités,' for a number of institutions in different European countries. The facts from Dr. Le Fort's book are abstracted on Table III., in which it is shown that out of 934,781 deliveries at home, in Edinburgh, London, Paris, Leipzig, Berlin, Munich, Greifswald, Stettin, and St. Petersburg, there were 4,405 deaths, equivalent to a mortality of 4.7 per 1,000. When compared with the Registrar-General's returns for town districts, this rate is apparently somewhat too low; it is only an approximation, but still sufficiently near the rate given by the Registrar-General to show that there is a true death-rate for home deliveries not far removed from the Registrar-General's figure.

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[More information](#)TABLE III.—*Table Showing the Death-rate from all Causes amongst Women Delivered in their own Homes. (Abstracted from Dr. Le Fort's Tables.)*

Places	No. of Years of Observation	Deliveries	Deaths	Deaths per Thousand
Edinburgh . . . .	1	5,186	28	5
London:				
Westminster General Dispensary . . . .	11	7,717	17	2
Ditto Benevolent Institution . . . .	7	4,761	8	1
Royal Maternity Charity . . . .	5	17,242	53	3
London population . . . .	5	562,623	2,222	3.9
St. Thomas' Hospital . . . .	7	3,512	9	2.5
Guy's Hospital . . . .	8	11,928	36	3
Ditto . . . .	1	1,505	4	2
Ditto : . . . .	1	1,702	3	1.7
Ditto : . . . .	1	1,576	11	6
Paris:				
12th Arrondissement . . . .	1	3,222	10	3
Bureau de Bienfaisance . . . .	1	6,212	32	5
Ditto . . . .	1	6,422	39	6
City of Paris . . . .	1	44,481	262	5
Ditto . . . .	1	42,796	226	5
Leipzig Polyclinique . . . .	11	1,203	13	10
Berlin " . . . .	1	500	7	14
Munich " . . . .	5	1,911	16	8
Greifswald " . . . .	4	295	6	20
Stettin " . . . .	17	375	0	0
St. Petersburg . . . .	15	209,612	1,403	6.6
Total . . . .	—	984,781	4,405	4.7



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## APPROXIMATE HOME DEATH-RATE.

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St. George's Hospital Statistics for 'the 6 years preceding 1870 show only one maternal death in every 305 cases' in the Out-door Maternity Department.

From home records, it is hoped at some future time to give many more data of this kind, and to distinguish the causes of death: puerperal from non-puerperal mortality, as well as that caused by puerperal diseases from that caused by accidents of childbirth. At present the data for doing this are lamentably deficient, if not almost altogether wanting.

One good recorded fact will here be given. Among 1,929 mothers delivered at home by Guy's Hospital in 1869, 5 deaths only are recorded, and none from puerperal diseases; 2 were from heart disease, 2 from pneumonia, 1 from exhaustion.

*OBJECTIONS TO THE DATA.*

The value of the Registrar-General's results, and of those given by Le Fort, has been called in question by Dr. Duncan in his work already cited, partly on the authority of certain results of home practice, quoted from Dr. M'Clin-tock, who has collected the statistics of 16,774 deliveries exclusively from home practice. There were among these 45 deaths from accidents of labour, 52 deaths from puerperal diseases, and 34 deaths from non-puerperal diseases; giving a total mortality of 131, or nearly 8 per 1,000. On considering these figures, the first impression they convey is not that either the Registrar-General or Le Fort is wrong. But it is a very painful impression of another kind altogether. One feels disposed to ask whether it can be true that, in the

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hands of educated accoucheurs, the inevitable fate of women undergoing, not a diseased, but an entirely natural condition, at home, is that one out of every 128 must die? If the facts are correct, then one cannot help feeling that they present a very strong *prima facie* case for enquiry, with the view of devising a remedy for such a state of things. It must be seen, however, that these statistics of home practice are as open to the charge of want of accuracy as those of the Registrar-General or Le Fort. The question can only be settled by enquiry, and by more carefully kept statistics of midwifery practice; but in the meantime here are a few facts, kindly placed at my disposal by Mr. Rigden, of Canterbury, which are by no means so hopeless as those given by Dr. Duncan.

‘An analysis of 4,132 consecutive cases in midwifery occurring in private practice during a period of 30 years, particularly in reference to mortality. Eight mothers died: three from convulsions and coma; 4 from puerperal fever; and one from heart disease, about an hour after a comparatively easy labour.’

The report states 8, but after it was supplied another death took place, the day after delivery, making 9 in all. The cause of death is not given.

Mr. Rigden explains that these figures relate only to the first fortnight after delivery; but he states that if any other deaths had taken place within the month, he must have heard of them.

Assuming the Deliveries at 4,133 and the Deaths at 9, Mr. Rigden's facts show a total mortality of 2.17 per 1,000, of which less than 1 per 1,000 was due to puerperal fever.