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National Child Development Study

Perinatal Mortality Survey – Additional Variables

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User Guide to the Dataset
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Thanks are also due to the many institutions and individuals who collaborated to initiate, fund, carry out, process and complete the Perinatal Mortality Survey, and all the families, midwives and other medical staff who provided information, both in the pilot and in the survey itself. Finally, special thanks are due to the late Professor Neville Butler who directed the survey, and who remained involved for many decades thereafter, initiating and encouraging a great deal of research using these data, as well as seeking funding for further longitudinal follow-up surveys.

1. Introduction

This document provides a brief guide to the history of the Perinatal Mortality Survey, the original birth survey from which the National Child Development Study (NCDS) evolved to become a well-established longitudinal data resource. In 2014 the Centre for Longitudinal Studies deposited additional variables from the Perinatal Mortality Survey and this guide provides details of those variables.

2. National Child Development Study

2.1 NCDS has its origins in the Perinatal Mortality Survey. Sponsored by the National Birthday Trust Fund, this was designed to examine the social and obstetric factors associated with stillbirth and death in early infancy among the 17,415 children born in Great Britain in that one week. There have subsequently been a further nine surveys seeking to gather information from respondents living in England, Scotland and Wales, in order to monitor their health, education, social and economic circumstances. A further 223 children born in GB, and 920 born abroad in that week, were traced in retrospect up to the age of 16, bringing the totals up to 17,638 born in GB and 18,558 including immigrants. In addition there was an attempt in 2013 to contact those once in GB but now living abroad, to invite participation in a web-based follow-up at age 55.

2.2 The above surveys were carried out in 1965 (age seven), 1969 (age eleven), 1974 (age sixteen), 1981 (age 23), 1991 (age 33), 1999/2000 (age 42), 2004/2005 (age 46), 2008/2009 (age 50) and 2013/14 (age 55). As part of the 1991 survey, information was additionally collected from co-resident partners, and for a third of the sample, data was also collected from any co-resident natural or adopted children of the cohort member.

2.3 In addition, a 'Biomedical Survey' was conducted in 2002/3 which sought to obtain objective measures of ill-health and biomedical risk factors.

2.4 Surveys of sub-samples of the cohort took place in 1976 (age 18), 1978 (age 20) and 1995 (age 37). The most recent sub-study, in 1995, involved conducting basic skills assessments with 10% of the cohort.

3. History and Origins of the Perinatal Mortality Survey

3.1 The National Birthday Trust Fund (NBTF), founded in 1928, initiated and supported programmes designed to discover the underlying causes of the high rate of maternal mortality then prevailing. The Joint Council of Midwifery was inaugurated and its report in 1935 led to the passing of the Midwives Act of 1936, through which a free Midwifery Service was set up for the first time in any country.

3.2 After the Second World War, plans were made to investigate the effects of factors in the pre-natal period and during labour which might result in perinatal morbidity and/or mortality. Professor W.Nixon (then Professor of Obstetrics and Gynaecology at London University) first had the idea of a Perinatal Mortality Survey (PMS) after attending the World Health Organisation Symposium on this topic in Brussels in 1953. With funding from the NBTF, he and Professor Neville Butler carried out a pilot investigation in the City of Norwich. Ideally, the PMS would have followed a large number of women throughout their pregnancies, but this proved impracticable because so many women booked late and received prenatal care in many different places.

3.3 Nevertheless, the nationwide PMS in 1958 proved unique, not only for Great Britain, but for the world: in scope, execution and analysis it was a major achievement, leading to a wealth of information on over 17,000 births.

3.4 During the fifteen years before the survey, maternal mortality had been reduced by over 80 per cent, and stillbirths by about 25 per cent (see 'Foreword' of Butler et al). Nevertheless, Butler & Bonham (1963) noted that in the three months March-May 1958 there were over 7,500 stillbirths and neo-natal deaths in the UK as well as the large number of healthy births.

3.5 The survey represented the first attempt to gather obstetric data at a national level, for example on toxaemia, antepartum haemorrhage and the abnormalities of labour.

3.6. The questionnaire used for the birth survey was designed to be completed by the midwife in attendance at delivery, with reference to all available records and after an interview with the mother. Information recorded included: social and family background, details of past obstetric history, antenatal care and abnormalities during pregnancy, length and abnormalities of labour, analgesia and anaesthesia as well as sex, weight, progress, management and outcome of the infant. In the case of stillbirths or neonatal deaths, a clinical summary was supplied by the midwife and medical attendants.

3.7 Guidance was given by accompanying instruction sheets, supplemented by personal briefing meetings given by the survey team throughout the country. Without the help of the complex administrative network of the National Health Service (only a decade old at the time), the project would not have been possible. Questionnaires were distributed in advance to maternity departments by Regional Hospital Boards and the Boards of Governors of Teaching Hospitals, and to domiciliary midwives by Medical Officers of Health. This enabled them to be filled in as soon as possible after delivery, or after death in the case of neonatal deaths, by the midwives concerned. Sets of questionnaires were also distributed to departments (such as premature baby units) where babies were likely to be admitted or might die after birth.

3.8 Midwives and medical staff completed over 25,000 questionnaires, doing much of the work voluntarily in their spare time.

3.9 The completed forms were checked by matrons, midwifery superintendents, or the supervisors of midwives and, finally, all completed forms were returned to the Medical Officer of Health for the County or County Borough area in which the births or perinatal deaths had taken place. Here the returns could be checked against the official notifications of births and deaths. Missing questionnaires were sought and any deficiencies rectified when the data was incomplete.

3.10 Although the survey was designed to encompass births in one specific week, in order to obtain sufficient stillbirths and neonatal deaths to justify comparison of the incidence of maternal factors with those in the main week, the death enquiry had to be continued throughout the months of March, April and May. Thus a *population* of the births during seven consecutive days could be compared with the *deaths* during three consecutive months. It was perhaps statistically not ideal to limit the population control to one week, but it was impossible to impose more on the already overloaded maternity services.

4. Findings of the Perinatal Mortality Survey

4.1 Completed questionnaires represented 98 & 94 per cent respectively of national returns for births, stillbirths and neonatal deaths in England, Wales and Scotland during the period covered by the PMS.

4.2 In the results below, the terms 'perinatal mortality' and 'perinatal deaths' represent stillbirths and babies dying within seven days of birth (i.e. 'early neonatal deaths'). Babies dying between 8 and 28 days after birth are referred to as 'late neonatal deaths.' The figure of 'neonatal deaths' is the sum of early- and late-neonatal deaths (see World Health Organisation definition).

4.3 The first report (Butler & Bonham,1963) showed a number of results which had perhaps not been anticipated - for example:

- There were marked regional differences in perinatal mortality, which was generally worse in the north and west and better in the south and east.
- Variations in the incidence of congenital malformations were a major factor in raising mortality in the south-western region and in reducing it in the eastern region.
- Haemoglobin testing revealed marked regional variation: generally the incidence of anaemia was highest in the north and west and lowest in the south and east.
- Increasing perinatal mortality with rising maternal age after thirty years was once more confirmed:
    - A woman giving birth at age 40 or more had double the average risk.
    - A mother aged under twenty had a 23 per cent greater chance of losing her baby soon after birth than those aged 20-24.
    - The lowest perinatal mortality of any was recorded for the 25-29 maternal age group.
- There was a social class gradient in the risk of perinatal mortality - if 100 represents the overall perinatal mortality rate for all classes combined, the rate rose from 64 in social class 1 (professional) to 128 in social class 5 (unskilled workers).
- The children of unmarried mothers had a 60 per cent greater prospect of an early death than other children. Compared with the children born to the wife of a professional man, the children of unmarried mothers had a two-to-one greater likelihood of dying in the first week of their lives.
- There was a marked association of mortality with the number of children in the family as well as with maternal age. It was about four times as dangerous to be born into a large family of an unskilled worker than into a small family of a professional father.

4.4 Further information is available in Butler and Bonham, 1963, Butler and Alberman, 1969 and Davie et al, 1972.

5. Perinatal Mortality Survey data within NCDS 'Childhood' dataset

5.1 For many years, the NCDS 'childhood' data have been available from the UK Data Archive (now part of the UK Data Service) as one longitudinally-linked dataset (study number SN5565). This combined dataset contains 62 variables from the birth questionnaire (n236 to n660, n1811 to 1833).

5.2 These 62 variables can be seen in the annotated version of the questionnaire (see Appendix 1). Not every question answered as part of the birth questionnaire was fully keyed in: questions 1-5 could not be keyed due to confidentiality considerations (e.g. 'Name of Patient'). Other questions were omitted due to financial constraints, or keyed in a summary form which did not capture the full variability of the responses. For instance, questions 31, 32 and 36 (Albuminuria, Eclampsia and X-Ray) were not keyed at all; and answers to question 29 (blood pressure) were condensed into the variable n548 'Raised Blood Pressure & Proteinuria,' rather than recording the actual level of the blood pressure.

6. Previous version of Perinatal Mortality Survey data

6.1 Another version of the PMS data has long been available at the Data Archive (study number SN2137). This was deposited by the National Birthday Trust Fund (most recent version May 1986). Although for many items on the questionnaire it contains more detailed keyed-in information than the NCDS dataset (SN5565), the SN2137 dataset has now become obsolete because it is only available in the 'card image' format used on mainframe computers before the advent of PCs, which means the variables are concatenated into long series of 80 characters. To separate these out, the user's input syntax needs to specify the 'start position' and length of each variable in turn, before 'manually' labelling them.

6.2 Furthermore, the individual case identifier used in this dataset is different from the 'ncdsid' now used in NCDS, so it cannot be linked longitudinally.

7. Conversion of SN2137 variables

7.1 An exercise was performed at the Centre for Longitudinal Studies to update the dataset holding PMS variables contained under Study Number 2137, by:

- Matching the identifiers to the correct NCDS participants
- Recoding variables to numeric format from mixed string and numeric
- Performing checks to ensure there were no discrepant/missing/duplicate cases compared to the main 'NCDS childhood' data held under Study Number SN5565
- Identifying which SN2137 variables contained information not previously available from the SN5565 dataset

7.2 There were 51 such variables holding additional information covering the following areas of questioning:

- Place of delivery
- Booking-in place
- Place of antenatal care
- Blood Pressure details
- Albuminuria and Eclampsia
- X-Rays
- Obstetric/pregnancy abnormalities
- Bleeding in pregnancy and before delivery

- Admission to hospital during antenatal period
- Type of labour or delivery admission (Hospital)
- What was presenting part when baby was delivered?
- Analgesia & Anaesthesia details
- Baby's possible resuscitation requirement
- Any drugs given to baby
- Baby's possible illness during first week of life
- Perinatal death or stillbirth: time/month/age
- Placental Weight

These 51 variables constitute the dataset that accompanies this User Guide.

7.3 The SN5565 dataset is supplied from the UK Data Service as a longitudinally-linked dataset of all those present in any childhood sweep (i.e. age 0, 7, 11 or 16), and so contains 18,558 cases. But there are only 17,415 cohort members who were present at the 'birth' sweep (see NCDS 'response' dataset, SN5560). This total is greater than the SN2137 dataset by 446. It has been verified that all 16,969 cases in the dataset which is the subject of this Guide do link longitudinally to the corresponding 16,969 cases of SN5565; but nevertheless there are 446 cases for which this 'additional variables' dataset adds no extra information. 426 of these are 'multiple' births (414 twins and 12 triplets), which were not included in the SN2137 dataset as a matter of National Birthday Trust Fund policy. The other twenty were NCDS singletons (i.e. non-multiple births) who were not able to be matched from SN5565 to a case in the SN2137 dataset.

7.4 The non-matching of these twenty cases means that totalling stillbirths and neonatal deaths from the data produces an analysis very slightly different from that published in the original report on the PMS (Butler & Bonham, 1963):

8. Description of additional variables

This section discusses the variables present on this version of the PMS dataset (drawn from dataset SN2137). Specifically, it explains how these differ from the variables already available in the main 'NCDS childhood' dataset (Study SN5565). Appendix 2 provides a further summary table of these variables.

8.1 Place of delivery and Booking-in place (Q6 and Q26b on Questionnaire – see Appendix 1)
In the SN5565 dataset, these are combined into one variable n556:

n556 Place of booking-& delivery if different

	Frequency	Percent	Valid Percent	Cumulative Percent
1 Home-Hospital	959	5.5	5.5	5.5
2 NHS-Mat. Home	2003	11.5	11.5	17.0
3 Mat. home-Hosp	291	1.7	1.7	18.7
4 Priv Nursng Home	405	2.3	2.3	21.0
5 Unbooked-Hosp	137	.8	.8	21.8
6 Unbooked-Home	62	.4	.4	22.1
7 Residue-Hosp	48	.3	.3	22.4
8 Residue-Home	176	1.0	1.0	23.4
9 Residue-GP Unit	140	.8	.8	24.2
10 Remainder	17	.1	.1	24.3
11 ANC Hospital	3229	18.5	18.5	42.9
12 ANC-Other Hosp	3222	18.5	18.5	61.4
13 ANC-Uknown Hosp	741	4.3	4.3	65.6
14 Home-ANC Hosp	454	2.6	2.6	68.2
15 Home-ANC, LHA	2299	13.2	13.2	81.4
16 Home-ANC, GP	244	1.4	1.4	82.8
17 Home-ANC midwife	2969	17.0	17.0	99.9
18 Home-ANC,None,DK	18	.1	.1	100.0
Total	17414	100.0	100.0	
-1 Missing	1	.0		
Total	17415	100.0		

In the SN2137 version, there are two separate variables, POD and BOOKING. Taken together, these give a certain amount of extra detail:

POD Q6:Place of Delivery

	Frequency	Percent	Valid Percent	Cumulative Percent
0 Domiciliary - Midwife booked	5862	34.5	34.5	34.5
1 Domiciliary - Midwife unbooked	138	.8	.8	35.4
2 NHS Maternity Home	1992	11.7	11.7	47.1
3 Private Nursing Home	400	2.4	2.4	49.5
4 Private ward of NHS hospital	92	.5	.5	50.0
5 Elsewhere	13	.1	.1	50.1
7 Mother and Baby Home	31	.2	.2	50.3
8 Hospital as booked case	7623	44.9	44.9	95.2
9 Hospital as unbooked case	818	4.8	4.8	100.0
Total	16969	100.0	100.0	

BOOKING Q26b: Booking In place

	Frequency	Percent	Valid Percent	Cumulative Percent
0 NHS Maternity Home	2159	12.7	12.7	12.7
1 Private Nursing Home	427	2.5	2.5	15.2
2 Private ward of NHS hospital	96	.6	.6	15.8
3 Other place	11	.1	.1	15.9
7 Mother and Baby Home	44	.3	.3	16.1
8 Hospital	6785	40.0	40.0	56.1
9 Domiciliary	7447	43.9	43.9	100.0
Total	16969	100.0	100.0	

8.2 Place of Antenatal Care (Q21(b) on Questionnaire – see Appx.1)

Not available in SN5565 version, which has n501 (total number of antenatal visits). SN5565 version also has n500 (week of 1st antenatal visit), which isn't present in SN2137 version.

PLANC Q21b: Place of Antenatal care

	Frequency	Percent	Valid Percent	Cumulative Percent
1 Hospital or consultant only	3432	20.2	20.3	20.3
2 Hospital or consultant plus other	4903	28.9	29.1	49.4
3 LHA alone or with lower	3293	19.4	19.5	68.9
4 GP (surgery, home or N Home) only	1890	11.1	11.2	80.1
5 GP plus midwife	3172	18.7	18.8	98.9
6 Midwife only	84	.5	.5	99.4
9 None	100	.6	.6	100.0
Total	16874	99.4	100.0	
-8 No information	95	.6		
Total	16969	100.0		

8.3 Blood Pressure (Q29)

SN5565 version has n548 (Raised blood pressure and proteinuria), which does not provide the measured BP level.

SN2137 version has DIASTOL Diastolic Blood Pressure (Q29a) & MAXDBP Maximum Diastolic Blood Pressure (Q29b).

n548 Raised blood pressure & proteinuria

	Frequency	Percent	Valid Percent	Cumulative Percent
1 Non toxaemic	11198	64.3	64.3	64.3
2 Hypertension	289	1.7	1.7	66.0
3 EH toxaemia mod.	70	.4	.4	66.4
4 EH toxaemia sev.	37	.2	.2	66.6
5 EH toxaemia CSU	41	.2	.2	66.8
6 EH tox. non CSU	14	.1	.1	66.9
7 Mild toxaemia	1464	8.4	8.4	75.3
8 Mod. toxaemia	348	2.0	2.0	77.3
9 Severe toxaemia	108	.6	.6	77.9
10 Toxaemia C.S.U.	223	1.3	1.3	79.2
11 Toxaemia non CSU	138	.8	.8	80.0
12 As 13-mild	1269	7.3	7.3	87.3
13 Unclassified-mod	286	1.6	1.6	88.9
14 As 13-severe	135	.8	.8	89.7
15 As 13-CSU	219	1.3	1.3	91.0
16 As 13-non CSU	190	1.1	1.1	92.1
17 As 13-protenuria	418	2.4	2.4	94.5
18 Eclampsia	19	.1	.1	94.6
19 Others & unknown	946	5.4	5.4	100.0
Total	17412	100.0	100.0	
-1 Missing	3	.0		
Total	17415	100.0		

DIASTOL Q29a: Diastolic Blood Pressure

	Frequency	Percent	Valid Percent	Cumulative Percent
1 Less than 90	8085	47.6	47.6	47.6
2 90 or more with rise to less than 10	8427	49.7	49.7	97.3
3 90 or more with rise to 10 or more	312	1.8	1.8	99.1
4 Don’t understand this one	145	.9	.9	100.0
Total	16969	100.0	100.0	

MAXDBP Q29b: Maximum Diastolic Blood Pressure

	Frequency	Percent	Valid Percent	Cumulative Percent
1 Less than 90	11510	67.8	71.2	71.2
2 90-99	3229	19.0	20.0	91.1
3 100-109	939	5.5	5.8	96.9
4 110+	495	2.9	3.1	100.0
Total	16173	95.3	100.0	
-8 No information	796	4.7		
Total	16969	100.0		

8.4 **Albuminuria and Eclampsia** (Q31 & Q32)

Not available in SN5565 version.

ALBECL Q31: Albuminuria and Eclampsia

	Frequency	Percent	Valid Percent	Cumulative Percent
0 Albumin not present	15252	89.9	91.7	91.7
1 Albumin present CSU taken no infect	571	3.4	3.4	95.2
2 Albumin present CSU taken, infection	180	1.1	1.1	96.3
3 Protein present, all other	608	3.6	3.7	99.9
5 Eclampsia no information	2	.0	.0	99.9
6 Eclampsia not present	4	.0	.0	99.9
7 Eclampsia present in CSU no infect	3	.0	.0	100.0
8 Eclampsia protein and infection	2	.0	.0	100.0
9 Eclampsia protein present, all other	4	.0	.0	100.0
Total	16626	98.0	100.0	
-8 No information	343	2.0		
Total	16969	100.0		

8.5 **X-ray given?** (Q36)

Not available in SN5565 version.

XRAY Q36: X-Ray given

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No X-Ray	10895	64.2	64.7	64.7
1 Chest only	4514	26.6	26.8	91.5
2 Chest and abdominal	322	1.9	1.9	93.4
3 Chest and Pelvimetry	155	.9	.9	94.4
4 Chest, Adominal, Pelvimetry	39	.2	.2	94.6
5 Adominal only	680	4.0	4.0	98.6
6 Adominal and Pelvimetry	57	.3	.3	99.0
7 Pelvimetry only	172	1.0	1.0	100.0
Total	16834	99.2	100.0	
-8 No information	135	.8		
Total	16969	100.0		

8.6 **Abnormalities & bleeding during pregnancy** (Q37)

SN5565 version condenses these into just one variable n522.
SN2137 version has a series of twelve (ABNORM0X to ABNOM09 and BLEED):

n522 0 Abnormality during pregnancy

	Frequency	Percent	Valid Percent	Cumulative Percent
1 None	12627	72.5	72.6	72.6
2 Accidental APH	61	.4	.4	72.9
3 Placenta praevia	71	.4	.4	73.3
4 Other APH	311	1.8	1.8	75.1
5 APH & 8	11	.1	.1	75.2
6 3 & 8	14	.1	.1	75.2
7 4 & 8	69	.4	.4	75.6
8 Vaginal bleeding	536	3.1	3.1	78.7
9 Other abnormality	3704	21.3	21.3	100.0
Total	17404	99.9	100.0	
-1	11	.1		
Total	17415	100.0		

ABNORM0X Q37: Obstetric, pregnancy abnormality – No information

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	16960	99.9	99.9	99.9
1 Yes	9	.1	.1	100.0
Total	16969	100.0	100.0	

ABNORM00 Q37: No Obstetric, pregnancy abnormality

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	3987	23.5	23.5	23.5
1 Yes	12982	76.5	76.5	100.0
Total	16969	100.0	100.0	

ABNORM01 Q37: Obstetric, pregnancy abnormality - Diabetes

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	16948	99.9	99.9	99.9
1 Yes	21	.1	.1	100.0
Total	16969	100.0	100.0	

ABNORM02 Q37: Obstetric, pregnancy abnormality - Heart

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	16839	99.2	99.2	99.2
1 Yes	130	.8	.8	100.0
Total	16969	100.0	100.0	

ABNORM03 Q37: Obstetric, pregnancy abnormality - Active TB

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	16929	99.8	99.8	99.8
1 Yes	40	.2	.2	100.0
Total	16969	100.0	100.0	

ABNORM04 Q37: Obstetric, pregnancy abnormality - influenza

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	14785	87.1	87.1	87.1
1 Yes	2184	12.9	12.9	100.0
Total	16969	100.0	100.0	

ABNORM05 Q37: Obstetric, pregnancy abnormality – German Measles

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	16961	100.0	100.0	100.0
1 Yes	8	.0	.0	100.0
Total	16969	100.0	100.0	

ABNORM06 Q37: Obstetric, pregnancy abnormality - Disproportion

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	16600	97.8	97.8	97.8
1 Yes	369	2.2	2.2	100.0
Total	16969	100.0	100.0	

ABNORM07 Q37: Obstetric pregnancy abnormality - External version

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	16434	96.8	96.8	96.8
1 Yes	535	3.2	3.2	100.0
Total	16969	100.0	100.0	

ABNORM08 Q37: Obstetric, pregnancy abnormality - Epilepsy

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	16434	96.8	96.8	96.8
1 Yes	535	3.2	3.2	100.0
Total	16969	100.0	100.0	

ABNORM09 Q37: Obstetric, pregnancy abnormality - Other

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	16935	99.8	99.8	99.8
1 Yes	34	.2	.2	100.0
Total	16969	100.0	100.0	

BLEED Q37: Bleeding in Pregnancy and before delivery

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No bleeding	12240	72.1	72.2	72.2
1 Accidental (APN)	59	.3	.3	72.5
2 Placenta praevia only	66	.4	.4	72.9
3 All other unspecified	310	1.8	1.8	74.7
4 Accidental + vaginal pre 28 weeks	7	.0	.0	74.8
5 Placenta gravia + vaginal pre 28 weeks	14	.1	.1	74.9
6 Unspecified APN + vaginal pre 28 weeks	69	.4	.4	75.3
7 Vaginal bleeding pre 28 weeks only	497	2.9	2.9	78.2
8 No APN or vaginal bleeding	3697	21.8	21.8	100.0
Total	16959	99.9	100.0	
-8 Don’t know	1	.0		
-1 No information	9	.1		
Total	10	.1		
Total	16969	100.0		

This last variable is very similar to n522 on the SN5565 version, but has slightly more detailed category descriptions.

8.7 Admission to hospital during antenatal period (q38)

Not available in SN5565 version.

AD2HOSP Q38a: Admission to hospital

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No admission	13555	79.9	79.9	79.9
1 Admission for toxaemia	1183	7.0	7.0	86.9
2 Admission for other than toxaemia	2038	12.0	12.0	98.9
3 Admission for toxaemia and other	190	1.1	1.1	100.0
Total	16966	100.0	100.0	
-1 No information	3	.0		
Total	16969	100.0		

8.8 Type of labour or delivery admission (Hospital) (q39)

Not available in SN5565 version.

ADTYPE Q39: Type of Labour or Delivery Admission (Hospital)

	Frequency	Percent	Valid Percent	Cumulative Percent
0 Admitted during labour as emergency	440	2.6	5.3	5.3
1 Booked at hospital but admitted other	83	.5	1.0	6.3
2 Admitted during labour as booked case	7433	43.8	89.2	95.5
3 Not admitted during labour	376	2.2	4.5	100.0
Total	8332	49.1	100.0	
-2 Not applicable	8637	50.9		
16969	100.0			

8.9 What was presenting part when baby was delivered? (q44)

Not available in SN5565 version.

PRESENT Q44: Presenting Part

	Frequency	Percent	Valid Percent	Cumulative Percent
0 Vertex OT	54	.3	.3	.3
1 Vertex OA	15657	92.3	92.9	93.3
2 Vertex OP	573	3.4	3.4	96.7
3 Breech	444	2.6	2.6	99.3
4 Shoulder	33	.2	.2	99.5
5 Face	64	.4	.4	99.9
6 Brow	14	.1	.1	100.0
7 Vertex and hand	6	.0	.0	100.0
Total	16845	99.3	100.0	
-1 No information	124	.7		
Total	16969	100.0		

8.10 Analgesic drugs to mother (other than inhalational) (q49)

Although Q48 covers inhalational analgesics (e.g. gas and air) and is coded similarly in both SN5565 and SN2137 versions, only the SN2137 version covers Q49, which goes on to ask about other painkilling drugs like chlorpromazine, barbiturates etc. These are coded into a series of ten variables:

LDRUG00 Q49a: No drugs of this type

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	4178	24.6	24.6	24.6
1 Yes	12791	75.4	75.4	100.0
Total	16969	100.0	100.0	

LDRUG01 Q49a: Chloral, Welldorm

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	14163	83.5	83.5	83.5
1 Yes	2806	16.5	16.5	100.0
Total	16969	100.0	100.0	

LDRUG02 Q49a: Barbiturate

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	16008	94.3	94.3	94.3
1 Yes	961	5.7	5.7	100.0
Total	16969	100.0	100.0	

LDRUG03 Q49a: Heroin

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	16902	99.6	99.6	99.6
1 Yes	67	.4	.4	100.0
Total	16969	100.0	100.0	

LDRUG04 Q49a: Largactil (chlorpomazine)

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	16813	99.1	99.1	99.1
1 Yes	156	.9	.9	100.0
Total	16969	100.0	100.0	

LDRUG05 Q49a: Sparine (promazine)

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	16933	99.8	99.8	99.8
1 Yes	36	.2	.2	100.0
Total	16969	100.0	100.0	

LDRUG06 Q49a: Phenergan (promethazine)

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	16926	99.7	99.7	99.7
1 Yes	43	.3	.3	100.0
Total	16969	100.0	100.0	

LDRUG07 Q49a: Doriden

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	16834	99.2	99.2	99.2
1 Yes	135	.8	.8	100.0
Total	16969	100.0	100.0	

LDRUG08 Q49a: Oblivon

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	16716	98.5	98.5	98.5
1 Yes	253	1.5	1.5	100.0
Total	16969	100.0	100.0	

LDRUG09 Q49a: Other

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	16887	99.5	99.5	99.5
1 Yes	82	.5	.5	100.0
Total	16969	100.0	100.0	

8.11 Was any anaesthetic administered to mother during labour? (q50)

Not available in SN5565 version.

ATHETIC Q50: Anaesthetic

	Frequency	Percent	Valid Percent	Cumulative Percent
0 Spinal	54	.3	2.3	2.3
1 Local	392	2.3	16.6	18.9
2 Pudendal Block	357	2.1	15.1	34.0
3 General	1068	6.3	45.2	79.1
4 None	487	2.9	20.6	99.7
9 No information	7	.0	.3	100.0
Total	2365	13.9	100.0	
-2 Not applicable	14604	86.1		
Total	16969	100.0		

8.12 Did the baby require resuscitation? (q55)

Not available in SN5565 version.

RESUS Q55: Resuscitation

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No resuscitation (no drugs)	16541	97.5	97.5	97.5
1 Intragastric oxygen (no drugs)	107	.6	.6	98.1
2 Enditrachial oxygen (no drugs)	16	.1	.1	98.2
3 Intragastric & Enditrachial no drugs	3	.0	.0	98.2
4 Mouth to Mouth (no drugs)	3	.0	.0	98.2
5 None or plain oxygen (with drugs)	226	1.3	1.3	99.6
6 Intragastric oxygen (with drugs)	63	.4	.4	99.9
7 Enditrachial oxygen (with drugs)	6	.0	.0	100.0
8 Intragastric & Enditrachial with drugs	1	.0	.0	100.0
9 Mouth to Mouth (with drugs)	2	.0	.0	100.0
Total	16968	100.0	100.0	
-8 Don't Know	1	.0		
Total	16969	100.0		

8.13 Was the baby given any drugs? (q56)

Not available in SN5565 version. Covered in SN2137 version by a series of 10 variables **DTB1-DTB10**:

DTB1 Q56: Drugs to baby (None)

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	1511	8.9	8.9	8.9
1 Yes	15458	91.1	91.1	100.0
Total	16969	100.0	100.0	

DTB2 Q56: Drugs to baby (Coranine)

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	16822	99.1	99.1	99.1
1 Yes	147	.9	.9	100.0
Total	16969	100.0	100.0	

DTB3 Q56: Drugs to baby (Lobeline)

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	16829	99.2	99.2	99.2
1 Yes	140	.8	.8	100.0
Total	16969	100.0	100.0	

DTB4 Q56: Drugs to baby (Sedatives)

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	16863	99.4	99.4	99.4
1 Yes	106	.6	.6	100.0
Total	16969	100.0	100.0	

DTB5 Q56: Drugs to baby (Antagonists, nalorphine, levalorfan)

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	16886	99.5	99.5	99.5
1 Yes	83	.5	.5	100.0
Total	16969	100.0	100.0	

DTB6 Q56: Drugs to baby (Synkavit, Vikastab)

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	16083	94.8	94.8	94.8
1 Yes	886	5.2	5.2	100.0
Total	16969	100.0	100.0	

DTB7 Q56: Drugs to baby (Sulphonamides)

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	16960	99.9	99.9	99.9
1 Yes	9	.1	.1	100.0
Total	16969	100.0	100.0	

DTB8 Q56: Drugs to baby (Penicillin)

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	16717	98.5	98.5	98.5
1 Yes	252	1.5	1.5	100.0
Total	16969	100.0	100.0	

DTB9 Q56: Drugs to baby (Streptomycin)

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	16774	98.9	98.9	98.9
1 Yes	195	1.1	1.1	100.0
Total	16969	100.0	100.0	

DTB10 Q56: Drugs to baby (Other antibiotics)

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No	16733	98.6	98.6	98.6
1 Yes	236	1.4	1.4	100.0
Total	16969	100.0	100.0	

8.14 What illness did the baby have during first week of life? (q59)

Not available in SN5565 version.

ILLNESS Q59: Baby's Illness

	Frequency	Percent	Valid Percent	Cumulative Percent
0 No disease (No transfer)	16401	96.7	97.1	97.1
1 Haemolytic disease (No transfer)	16	.1	.1	97.2
2 Respiratory disease (No transfer)	104	.6	.6	97.8
3 Other infections (No transfer)	175	1.0	1.0	98.8
4 Other conditions (No transfer)	81	.5	.5	99.3
5 Haemolytic disease (With transfer)	5	.0	.0	99.3
6 Haemorrhagic disease (With transfer)	19	.1	.1	99.5
7 Respiratory disease (With transfer)	21	.1	.1	99.6
8 Other infections (With transfer)	17	.1	.1	99.7
9 Other conditions (With transfer)	54	.3	.3	100.0
Total	16893	99.6	100.0	
-1 No information	76	.4		
Total	16969	100.0		

8.15 Fate of baby at end of first week of life (q60-65)

SN5565 version does not go into detail about this, although we have death details on NCDS response/deaths dataset (SN5560). SN2137 version has a series of six variables **MOD-TABLE62:**

MOD Q61: Month of Death

	Frequency	Percent	Valid Percent	Cumulative Percent
0 Survivor (livebirth /lived)	16355	96.4	96.4	96.4
3 Died in March	614	3.6	3.6	100.0
Total	16969	100.0	100.0	

TOD Q61: Time of death

	Frequency	Percent	Valid Percent	Cumulative Percent
0 SB (mac over 24hr prelabour-antepartum)	130	.8	21.2	21.2
1 SB (mac peripartum - intrapartum)	24	.1	3.9	25.1
2 SB (mac dk when died - unspecified)	30	.2	4.9	30.0
3 SB (fresh 1st stage)	90	.5	14.7	44.6
4 SB (fresh death in 2nd stage)	92	.5	15.0	59.6
6 Neo-natal death (NND) (under 30 mins)	9	.1	1.5	61.1
7 NND (1st week under 7 days)	186	1.1	30.3	91.4
8 NND (7 days but under 28 days)	53	.3	8.6	100.0
Total	614	3.6	100.0	
-1 Not applicable	16355	96.4		
Total	16969	100.0		

AAD Q61: Age at Death

	Frequency	Percent	Valid Percent	Cumulative Percent
0 Still Birth	369	2.2	59.7	59.7
1 Under 30 minutes	10	.1	1.6	61.3
2 Over 30 mins, under 1 day	97	.6	15.7	77.0
3 1 day and over and under 2 days	26	.2	4.2	81.2
4 2 days and over and under 3 days	23	.1	3.7	85.0
5 3 days and over and under 4 days	23	.1	3.7	88.7
6 4 days and over and under 5 days	6	.0	1.0	89.6
7 5 days and over and under 6 days	6	.0	1.0	90.6
8 6 days and over and under 7 days	5	.0	.8	91.4
9 7 days and over and under 10 days	19	.1	3.1	94.5
10 10 days and over and under 14 days	12	.1	1.9	96.4
11 14 days and over and under 28 days	22	.1	3.6	100.0
Total	618	3.6	100.0	
-1 Not applicable	16351	96.4		
Total	16969	100.0		

SBNND Q61: Still Birth or Neo-natal Death (Derived)

	Frequency	Percent	Valid Percent	Cumulative Percent
1 Still Birth	366	2.2	59.6	59.6
2 Neo-natal Death	248	1.5	40.4	100.0
Total	614	3.6	100.0	
-1 Survivor	16355	96.4		
Total	16969	100.0		

PLCWGT Placental Weight

	Frequency	Percent	Valid Percent	Cumulative Percent
0 250-299 gm	33	.2	10.7	10.7
1 300-349 gm	23	.1	7.4	18.1
2 350-399 gm	4	.0	1.3	19.4
3 400 -449 gm	3	.0	1.0	20.4
4 450-399 gm	22	.1	7.1	27.5
5 500-549 gm	1	.0	.3	27.8
6 550-599 gm	16	.1	5.2	33.0
7 600-649 gm	16	.1	5.2	38.2
8 650-699 gm	65	.4	21.0	59.2
9 700+ gm	18	.1	5.8	65.0
10 Less than 250 gm	108	.6	35.0	100.0
Total	309	1.8	100.0	
-1 Not weighed	307	1.8		
System	16353	96.4		
Total	16660	98.2		
Total	16969	100.0		

TABLE62 Time of death for still births and neonatal deaths (Table 62)

	Frequency	Percent	Valid Percent	Cumulative Percent
0 Antepartum Macerated	160	.9	26.0	26.0
1 Intrapartum - macerated	24	.1	3.9	29.9
2 Intrapartum - Fresh 1st Stage	90	.5	14.6	44.6
3 Intrapartum - Fresh 2nd Stage	92	.5	15.0	59.5
4 1st day	107	.6	17.4	76.9
5 2nd day	26	.2	4.2	81.1
6 3rd day	23	.1	3.7	84.9
7 4th	23	.1	3.7	88.6
8 5th	6	.0	1.0	89.6
9 6th	6	.0	1.0	90.6
10 7th	5	.0	.8	91.4
11 8 to 10 days	19	.1	3.1	94.5
12 10 to 14 days	12	.1	2.0	96.4
13 14 days to 28 days	22	.1	3.6	100.0
Total	615	3.6	100.0	
-1 Not applicable	16354	96.4		
Total	16969	100.0		

9. References

BUTLER, N.R and BONHAM, D.G. (1963) **Perinatal Mortality: The First Report of the 1958 British Perinatal Mortality Survey,** Edinburgh: Livingstone

BUTLER, N.R and ALBERMAN, E.D. (1969) **Perinatal Problems,** Edinburgh: Livingstone

DAVIE, R, BUTLER, N.R and GOLDSTEIN, H. (1972) **From Birth to Seven: The Second Report of the National Child Development Study (1958 Cohort)**. London: Longman in association with the National Children's Bureau.

Appendix 1: Summary of additional variables deposited

Variable name	Question Number	Variable description	Corresponding variables in SN5565	Variable description (SN5565)
POD	Q6	Place of delivery	N556	Place of booking-& delivery if diff
BOOKING	Q26b	Booking-in place	N556	Place of booking-& delivery if diff
PLANC	Q21b	Place of antenatal care	N501	Total number of antenatal visits
DIASTOL	Q29a	Diastolic Blood Pressure	N548	Raised BP and proteinuria
MAXDP	Q29b	Maximum Diastolic Blood Pressure	N548	Raised BP and proteinuria
ALBECL	Q31, Q32	Albuminuria and Eclampsia	None	N/A
XRAY	Q36	X-Ray given?	None	N/A
ABNORM0X	Q37	Obstetric, pregnancy abnormality – No information	N522	Abnormality during pregnancy (9 categories)
ABNORM00	Q37	No obstetric, pregnancy abnormality	None	N/A
ABNORM01	Q37	Obstetric, pregnancy abnormality – Diabetes	None	N/A
ABNORM02	Q37	Obstetric, pregnancy abnormality – Heart	None	N/A
ABNORM03	Q37	Obstetric, pregnancy abnormality – Active TB	None	N/A
ABNORM04	Q37	Obstetric, pregnancy abnormality – Influenza	None	N/A
ABNORM05	Q37	Obstetric, pregnancy abnormality – German Measles	None	N/A

Variable name	Question Number	Variable description	Corresponding variables in SN5565	Variable description (SN5565)
ABNORM06	Q37	Obstetric, pregnancy abnormality – Disproportion	None	N/A
ABNORM07	Q37	Obstetric, pregnancy abnormality – External version	None	N/A
ABNORM08	Q37	Obstetric, pregnancy abnormality – Epilepsy	None	N/A
ABNORM09	Q37	Obstetric, pregnancy abnormality – Other	None	N/A
BLEED	Q37	Bleeding in pregnancy and before delivery	None	N/A
AD2HOSP	Q38a	Admission to hospital during antenatal period	None	N/A
ADTYPE	Q39	Type of labour or delivery admission (Hospital)	None	N/A
PRESENT	Q44	What was presenting part when baby was delivered?	None	N/A
Analgesic drugs to mother (LDRUG00 to ATHETIC)				
LDRUG00	Q49a	No drugs of this type	None	N/A
LDRUG01	Q49a	Chloral, Welldorm	None	N/A
LDRUG02	Q49a	Barbiturate	None	N/A
LDRUG03	Q49a	Heroin	None	N/A
LDRUG04	Q49a	Largactil (chlorpromazine)	None	N/A
LDRUG05	Q49a	Sparine (promazine)	None	N/A
LDRUG06	Q49a	Phenergan (promethazine)	None	N/A
LDRUG07	Q49a	Doriden	None	N/A

Variable name	Question Number	Variable description	Corresponding variables in SN5565	Variable description (SN5565)
LDRUG08	Q49a	Oblivon	None	N/A
LDRUG09	Q49a	Other	None	N/A
ATHETIC	Q50	Any anaesthetic administered during labour?	None	N/A
RESUS	Q55	Did the baby require resuscitation?	None	N/A
DTB1	Q56	Drugs to baby (none)	None	N/A
DTB2	Q56	Drugs to baby (Coranine)	None	N/A
DTB3	Q56	Drugs to baby (Lobeline)	None	N/A
DTB4	Q56	Drugs to baby (Sedatives)	None	N/A
DTB5	Q56	Drugs to baby (Antagonists, nalorphine, levalorfan)	None	N/A
DTB6	Q56	Drugs to baby (Synkavit, Vikastab)	None	N/A
DTB7	Q56	Drugs to baby (Sulphonamides)	None	N/A
DTB8	Q56	Drugs to baby (Penicillin)	None	N/A
DTB9	Q56	Drugs to baby (Streptomycin)	None	N/A
DTB10	Q56	Drugs to baby (Other antibiotics)	None	N/A
ILLNESS	Q59	What illness did baby have during first week of life?	None	N/A
MOD	Q61	Month of death	(response/death file)	(response/death file)

Variable name	Question Number	Variable description	Corresponding variables in SN5565	Variable description (SN5565)
TOD	Q61	Time of death	(response/death file)	(response/death file)
AAD	Q61	Age at death	(response/death file)	(response/death file)
SBNND	Q61	Still Birth or Neo-Natal Death (derived)	(response/death file)	(response/death file)
PLCWGT		Placental Weight	None	N/A
TABLE62	Table 62	Time of death for stillbirths & neonatal deaths	(response/death file)	(response/death file)