Explanatory notes: maternity, 2007-08

For the 2007-08 financial years, Hospital Episode Statistics (HES) has collected more than 15 million records detailing episodes of admitted patient care delivered by NHS hospitals in England. Included in these 15 million records are details of each birth which takes place in an NHS hospital. This information has been published in recent years in an annual statistical bulletin.

This is the tenth bulletin that has been published on this subject. The first bulletin covered the period 1989-90 to 1994-95, the second bulletin covered years 1995-96 to 1997-98, and the third 1997-98 to 2000-01. The bulletin has been published annually from 2001-02.

Coverage and quality

Historically, maternity HES data has had separate quality and coverage issues which are not associated with other aspects of HES data. Between 2001-02 and 2005-06, coverage of hospital deliveries was 72.6% on average, whereas that of home deliveries was 13.6% on average. In addition to this, a number of trusts persistently submit poor quality data. Some of the issues associated with the coverage and data quality problems are listed below:

- Trusts submitting a significantly higher number of delivery episodes compared to birth episodes.
- Trusts failing to submit data on the number of birth episodes where they record a high number of delivery episodes.
- Trusts failing to submit delivery records – the reason for this is that approximately 20 trusts have a stand alone maternity system which is not linked to a patient administration system. The transfer of maternity information between systems leaves scope for errors and shortfalls within the data.
- Trusts identifying a high number of maternity beds available, but not recording any information about deliveries or births.
- Trusts identifying that they have no maternity beds available, but recording a high number of birth and delivery episodes.
- Some trusts have space in their maternity system to record 9 birth tails, whereas other systems have space for 18. As deliveries, miscarriages and abortions are all recorded in the birth tail, there are cases where 9 tails is not enough to record all of the relevant data.

As a result, maternity data has previously undergone additional manually intensive validation, including comparisons with data on registered births from the Office for National Statistics (ONS). These validation processes were intended to provide a realistic estimate of maternity related activity within the NHS because of the known shortfalls in the data.

Consultation

The NHS Information Centre for Health and Social Care (The NHS IC) began a complete review of the NHS Maternity Statistics publication in December 2007. The review was carried out in the interest of bringing the publication in line with the National Statistics code of practice, supporting the measurement of the maternity Public Service Agreement (PSA) indicator and continuous improvement of published data within The NHS IC.

The results of this review were published in a public consultation in May 2008 along with a number of proposals for the future direction of the publication. Stakeholders were able to provide feedback via a questionnaire.

As a result of the consultation exercise a number of revisions were made to NHS Maternity Statistics from 2006-07 onwards, full details can be found on The NHS IC website [http://www.ic.nhs.uk/work-with-us/consultations].

The main changes resulting from the consultation exercise were as follows:

1. Cessation of manual data cleaning

As described above, maternity data has been subject to intensive manual validation in previous years, this involved excluding errors and "unknown" values.

Maternity data for 2006-07 and 2007-08 was subject to standard HES data cleaning. However, the data was not subject to the same manual validation processes as in previous years.

The NHS IC is in the process of obtaining clinical guidance around the manual cleaning rules which will enable us to implement these into the standard HES data cleans in future years.

Note: A data quality flag has been used as an interim measure in order to highlight data (in grey shading) which would have previously been excluded from the publication.

2. Cessation of grossing

The Office for National Statistics' (ONS) registered births data was used to gross NHS Maternity Statistics prior to the 2006-07 publication in order to compensate for known shortfalls in HES maternity data. Following the consultation process it was decided that NHS Maternity Statistics will be published un-grossed in order to avoid undue delays as ONS registered births data is published approximately one year later than HES.

However, The NHS IC acknowledges concerns about the need for consistent grossed data among some users; therefore a commitment was made to carry out grossing on key statistics from the 2006-07 publication when ONS registered births data is available.

Summary

A number of revisions have been made to the methodology used in *NHS Maternity Statistics.* These revisions are intended to bring the publication in line with the National Statistics code of practice and highlight data quality issues in order to stimulate improvement in the quality of HES maternity data submitted by NHS organisations.

The NHS IC will continue to monitor data quality and is currently developing a maternity Data Quality Dashboard which will encourage NHS trusts to quality assure their data. The Data Quality Dashboard is a national resource to support improvement and completeness of all Commissioning Dataset (CDS) data flows to the Secondary Uses Service (SUS). We will continue to review and update methodology in order to maintain best practice and produce a high quality maternity statistics publication.

Table specific issues

Data quality flag

A data quality flag has been used to highlight data (in grey shading) that is to be treated with caution when interpreting this table. This data includes impossible or very unlikely events, such as: spontaneous deliveries with a general anaesthetic; spontaneous deliveries after caesarean onset and unrealistic data in relation to gestation length and birth weight. No attempt has been made to correct the data as it is impossible to be sure which part of the data is incorrect, ie whether or not the delivery was spontaneous or whether or not a general anaesthetic had been used.

Low number suppression

For reasons of confidentiality, numbers between 1 and 5 have been suppressed and replaced with "*" (an asterisk). Where it was possible to identify numbers from the total due to a single suppressed number in a row or column, an additional number (the next smallest) has been suppressed in order to protect patient confidentiality. This is in line with the HES Protocol, which can be downloaded from the

HESonline website.
[http://www.hesonline.nhs.uk/Ease/servlet/ContentServer?siteID=1937&categoryID=331].

Denominators

The percentages for some of the tables have been derived using a denominator figure from another relevant table. For example, in Table 23 the percentage figure for O32 'Malpresentation of Fetus by spontaneous onset and spontaneous delivery' has been derived using the total number of deliveries with a spontaneous onset and spontaneous delivery from Table 12. Please refer to the explanatory notes files for individual tables for further details about denominators.

Time series

Extreme care must be exercised when comparing HES figures for different years. Fluctuations in the data can occur for a number of reasons, including: organisational changes, reviews of best practice within the medical community, the adoption of new coding schemes and data quality problems that are often year specific. These variations can lead to false assumptions about trends. We advise users of time series data to carefully explore the relevant issues before drawing any conclusions about the reasons for year-on-year changes.

It was not possible to continue the existing maternity time series due to the changes in methodology described above, therefore 2005-06 figures have been reproduced using the new methodology so that comparisons can be made between the three most recent years. The years prior to this (previously published) have also been presented although users must exercise caution when comparing these to the three most recent years using the revised methodology.

Stillbirth information

Heatherwood and Wexham Park Hospitals NHS Foundation Trust (RD7) recorded 99% of all delivery episodes as stillborn in 2007-08, which accounts for 5,459 deliveries. This trust has been excluded from tables 26 and 28 containing stillbirth counts within the 2007-08 HES maternity publication in order to avoid artificially inflating the rate of stillborn babies. For this reason, the number of stillborns should be treated with caution as it does not include any potentially genuine stillborns at this trust. As a result, the total number of deliveries in these tables is not consistent with the total number of deliveries reported in other tables which is 649, 837.

False delivery records

Hospital Episode Statistics determines if a delivery has taken place if it is included in the delivery commissioning data set (CDS). It has come to our attention that the number of delivery episodes submitted to the delivery CDS by Scarborough and North East Yorkshire Health Care NHS Trust is significantly higher than the number of deliveries actually taking place at the Trust, ie they have incorrectly submitted a large number of general episodes (where no delivery took place) to the delivery CDS.

Recent discussions with Scarborough and North East Yorkshire Health Care NHS Trust have indicated that these figures are an anomaly.

Sextuplets: 2006-07 and 2007-08 universes

There are large numbers (47,000) of delivery records containing spurious tails. Instead of the one or two tails that should be attached to the delivery record, typically 6 delivery tails are present. Birth records are not affected. The impact is that large numbers of delivery records representing high order multiple births are present in the maternity data set.

For this reason, all publication tables represent data for the first baby born from a single delivery; therefore excluding information about additional babies from multiple deliveries which is likely to be inaccurate. The vast majority of deliveries are singletons and hence would not be affected by this exclusion.

Definitions

Finished Consultant Delivery Episode (FCE)

A finished consultant episode (FCE) is defined as a period of admitted patient care under one consultant within one healthcare provider. FCEs are counted against the year in which the FCE finishes.

The main episode types used in the maternity publication are 'Delivery episode', 'Other delivery event', 'Birth episode' and 'Other birth event':

- Maternity events taking place in either NHS hospitals or in non-NHS hospitals funded by the NHS will be recorded as ordinary 'Delivery' or 'Birth' episodes.
- 'Other Delivery events' are delivery events other than those resulting in delivery or birth episodes under NHS funding or in any other facility supplied under a service agreement with the NHS.
- 'Other Birth events' include NHS funded home births and all other birth events which are not NHS-funded, either directly or under an NHS service agreement.

In addition to the above, some tables have also used the 'General' episode type (or non delivery episodes), for example, to identify the number of ectopic pregnancies and miscarriages which resulted in an NHS hospital stay.

The data in these records comes from birth notification records and require only a limited data set to be completed.

Episode duration

This field contains the difference in days between the episode start date and the episode end date. If the episode is unfinished, the episode duration is calculated from episode start date and the end of the data year.

Main procedure and interventions

Each episode in HES has up to 24 procedure and intervention fields (12 from 2002-03 to 2006-07 and 4 prior to 2002-03). The main procedure and intervention need not be the first that took place (eg where major surgery is preceded by a biopsy) but should be the one that is the most resource intensive.

The method of delivery has been identified throughout the publication using the main operative procedure (see below for relevant OPCS codes); 96% of delivery episodes have one of the relevant codes recorded as the main procedure/intervention.

Changes to coding classifications: OPCS-4

Operative procedure codes were revised for 2006-07 and 2007-08. Data for 2007-08 uses OPCS-4.4 codes, 2006-07 data uses OPCS-4.3 codes, and data prior to 2006-07 uses OPCS-4.2 codes. All codes that were in OPCS-4.2 remain in later OPCS-4 versions, however the introduction of OPCS-4.3 codes enable the recording of interventions and procedures which were not possible in OPCS-4.2. In particular, OPCS-4.3 and OPCS-4.4 codes additionally include high cost drugs and diagnostic imaging, testing and rehabilitation. You may also find that some activity may have been coded under different codes in OPCS-4.2. These changes need to be borne in mind when analysing time series and may explain any trends over time.

You can read more information about the changes on the Connecting for Health website [http://www.connectingforhealth.nhs.uk].

Tables using OPCS codes for Method of delivery:

Table 5: Method of delivery by person conducting delivery, 2007-08.
Table 9: Method of delivery, 1980 to 2007-08.
Table 10: Method of delivery by Strategic Health Authority of treatment, 2007-08.
Table 11: Method of delivery by method of onset of labour, 2007-08.

Table 12: Method of delivery by method of onset, summary table, 2007-08.
Table 13: Method of delivery and method of onset of labour by ethnic group.
Table 15: Deliveries with episiotomy by method of delivery, 1975 to 2007-08.
Table 16: Deliveries with episiotomy by method of delivery and Strategic Health Authority of treatment, 2007-08.
Table 19: Duration of antenatal stay by method of delivery and Strategic Health Authority of treatment, 2007-08.
Table 20: Duration of postnatal stay by method of delivery and Strategic Health Authority of treatment, 2007-08.
Table 21: Duration of delivery episode by method of onset of labour and method of delivery, 2007-08.
Table 23: Deliveries with selected complications by method of onset of labour and method of delivery, 2007-08.
Table 27: Deliveries by length of gestation, method of onset of labour and method of delivery, 2007-08.
Table 32: Method of delivery by NHS trust and site, 2007-08.

Main and secondary procedure/intervention

These figures represent the number of episodes where the procedure (or intervention) was recorded in any of the 24 available fields (12 from 2002-03 to 2006-07 and 4 prior to 2002-03) in each HES record. A record is only included once in each count, even if the procedure is recorded in more than one operative procedure field of the record.

The OPCS code R27 'Other operations to facilitate delivery' was also used as a condition for the tables listed below, which means this code had to be recorded in one of the 24 procedure and intervention fields for records to be counted in these tables.

Tables using R27 'Other operations to facilitate delivery' which includes Episiotomy, other specified and Unspecified:
Table 15: Deliveries with episiotomy by method of delivery, 1975 to 2007-08.
Table 16: Deliveries with episiotomy by method of delivery and Strategic Health Authority, 2007-08.
Table 35: Unassisted deliveries, 2007-08

Primary and secondary diagnosis

The International Classification of Disease and Related health problems, 10th revision (ICD-10) is the coding classification used for tables using primary diagnosis. These figures represent the number of episodes where the diagnosis was recorded in any of the 20 (14 from 2002-03 to 2006-07 and 7 prior to 2002-03) primary and secondary diagnosis fields in a HES record. Each episode is only counted once, even if the diagnoses are recorded in more than one diagnosis field of the record.

Tables and figures using ICD-10 diagnosis codes are:
Table 22: Complications recorded during the delivery episode, 2007-08.
Table 23: Deliveries with selected complications by method of onset and method of delivery, 2007-08.
Table 24: Complications during non-delivery obstetric episode, 2007-08.
Table 25: Births with complications, 2007-08.
Figure 2: Miscarriage and ectopic pregnancies that resulted in an NHS hospital stay, England, 1996-97 to 2007-08.
Figure 3: Ectopic pregnancies that resulted in an NHS hospital stay by age, England, 2007-08.
Figure 4: Miscarriages that resulted in a hospital stay by age: rates per 100 deliveries, 2007-08.

Strategic Health Authority (SHA) of treatment

This field is derived from the hospital provider code. It indicates the strategic health authority (SHA) area within which the treatment took place.

Hospital providers

A provider code is a unique code that identifies an organisation acting as a health care provider. The code is managed by the National Administrative Codes Service (NACS) and supports the identification of organisations exchanging information within the NHS.

The 3-character code contains only the first three characters (the organisation code) and can be used to identify an individual provider (eg NHS trust or PCT). The 5-character code is the complete NHS provider code (ie organisation code plus site code). Not all NHS trusts provide data at 5-character site level.

Ethnicity

Ethnicity data on HES should be used with care and may not yet be robust enough to support analysis of ethnic differences. Ethnic group was collected from 1 April 1995 to 31 March 2002 and Ethnic category, using the definitions in the 2001 census, from 1 April 2002. This is a 'soft' data item, in so far as the patient should currently self-select their category from a preferred list, and some patients choose not to provide this information. The incompleteness of data collected centrally (as a by-product of local information systems) and issues around the quality of ethnic coding may mean that the data are not yet fit for routine analysis, although useful for addressing issues of data quality.

The following grouping has been used for the Ethnicity data:

- Asian and Asian British which includes – Indian, Pakistani, Bangladeshi and any other Asian background.
- Black and Black British which includes – Caribbean, African and any other Black background.
- Chinese and any other ethnic group.
- White which includes – British, Irish and any other White background.
- Mixed which includes – White and Black Caribbean, White and Black African, White and Asian and any other Mixed background.
- Not stated.
- Ethnicity not known.

Age at start of episode

This is a derived field calculated from episode start date and date of birth and contains the patient's age in whole years (From 1 to 115 (1990-91 to 1994-95) and from 1 to 120 (1995-96 onwards)).

Median

The median is the middle value of a distribution; half the values in the distribution are above the median and half the values are below. Where there is an even number of records, the higher of the two middle values are taken to give the median.

Percentile

A percentile is the value of a variable below which a certain percentage of observations fall. Therefore the 5th percentile is the value below which the lowest 5% of the scores appear and the 95th percentile is the value below which 95% of the scores appear.

Maternity specific definitions

Anaesthetic given during labour or delivery

This field defines the anaesthetic or analgesic administered before and during labour and delivery. The values it can take are:

- General anaesthetic; the administration by a doctor of an agent intended to produce unconsciousness.
- Epidural or caudal anaesthetic; the injection of a local anaesthetic agent into the epidural space.
- Spinal anaesthetic; the injection of a local anaesthetic agent into the subarachnoid space.

- General anaesthetic and epidural or caudal anaesthetic.
- General anaesthetic and spinal anaesthetic.
- Epidural or caudal and spinal anaesthetic.
- Other than above.
- Not applicable, ie no analgesic or anaesthetic administered.
- Not known.

For analyses where the anaesthetic given during labour or delivery has been grouped, the following aggregated groups have been used:

1. General – includes general anaesthetic, general and spinal anaesthetic & general and epidural or caudal anaesthetic.
2. Spinal – includes spinal anaesthetic and epidural or caudal and spinal anaesthetic.
3. Epidural – includes epidural or caudal anaesthetic.
4. Other – other anaesthetic than 1-3 above and not applicable.
5. Not known.

Antenatal days of stay

This derived field contains the number of days between the start of the episode and the date of delivery of the first baby.

Birth weight

This field contains the weight of the baby in grams immediately after birth. This item appears for each baby on multiple birth delivery records.

Change of delivery place reason

This field defines the reason for changing the delivery place type. The values it can take are:

- Decision made during pregnancy because of change of address
- Decision made during pregnancy for clinical reasons
- Decision made during pregnancy for other reasons
- Decision made during labour for clinical reasons
- Decision made during labour for other reasons
- Occurred unintentionally during labour (not present in 2002-03 HES data)
- Other
- Not applicable
- Not known.

Delivery place (actual)

This field defines the actual type of delivery place. This item appears for each baby on multiple birth delivery records. The values it can take are:

- At a domestic address
- In NHS hospital – delivery facilities associated with consultant ward
- In NHS hospital – GMP ward
- In NHS hospital – midwife ward
- In NHS hospital – joint consultant / GMP / midwife ward
- In private hospital
- In other hospital or institution
- In NHS hospital – ward or unit without delivery facilities
- Other, ie none of the above
- Not known.

Note: Deliveries at a domestic address and those outside NHS hospitals have been excluded due to poor coverage.

Delivery place (intended)

This field defines the intended type of delivery place. The initial intention is designated by the general medical practitioner (GMP) and midwife, or by the GMP and hospital staff. The decision is normally made when the mother is assessed for delivery. The values it can take are:

- At a domestic address
- In NHS hospital – delivery facilities associated with consultant ward
- In NHS hospital – GMP ward
- In NHS hospital – midwife ward
- In NHS hospital – joint consultant / GMP / midwife ward
- In private hospital
- In other hospital or institution
- In NHS hospital – ward or unit without delivery facilities
- Other, ie none of the above
- Not known.

First antenatal assessment date

This field contains the date when a pregnant woman was first assessed and arrangements were made for antenatal care. This is not necessarily the date when delivery arrangements were made.

Gestation period in weeks at first antenatal assessment

This field shows the gestation period in weeks at the date of the first antenatal assessment. It is calculated from first antenatal assessment date, length of gestation and the date of birth of baby and is usually recorded once the delivery has taken place.

Length of gestation

This field contains the number of completed weeks of gestation according to the World Health Organization definition, which specifies time from the first day of the last menstrual period. If this date is not reliable, an estimate is provided. This item appears for each baby on multiple birth delivery records.

Birth status

This field contains a code which indicates whether the baby was born alive or dead (stillbirth). A stillbirth is a birth after a gestation period of 24 weeks (168 days) where the baby shows no sign of life when delivered. This item appears for each baby on multiple birth delivery records.

Method of delivery

For the 2006-07 and 2007-08 publication, method of delivery has been obtained using OPCS-4.3 and OPCS-4.4 codes (see separate explanation of OPCS codes).

For analyses where the method of delivery has been grouped, the following aggregated groups have been used:

1. Spontaneous – includes deliveries recorded R23 Spontaneous cephalic vaginal delivery, R24 Normal delivery and R20 Other breech delivery.
2. Instrumental – includes deliveries recorded as R21 Forceps cephalic delivery, R22 Vacuum delivery and R19 Breech extraction delivery.
3. Caesarean – includes deliveries recorded as R17 Elective caesarean delivery and R18 Other caesarean delivery (includes emergency caesarean delivery)
4. Other – includes R25.1 Other methods of delivery, Caesarean hysterectomy R25.8 other specified and R25.9 unspecified.
5. Unknown – refers to delivery episodes where the main procedure/intervention OPCS code was not in the range R17-R25 or where there was no OPCS code recorded.

Method of onset of labour

This field defines the method used to induce (initiate) labour, rather than to accelerate it. The values it can take are:

- Spontaneous; the onset of regular contractions, whether preceded by spontaneous rupture of the membranes or not.
- Any caesarean section carried out before the onset of labour; or a planned elective caesarean section carried out immediately following the onset of labour, when the decision was made before labour.*
- Surgical induction; by amniotomy.
- Medical induction; including the administration of agents either orally, intravenously or intravaginally with the intention of initiating labour.
- Combination of surgical induction and medical induction.
- Not applicable.
- Not known.

** If an unplanned caesarean section is performed after labour has started the code for 'Any Caesarean' section as a method of onset of labour is not to be used.*

For analyses where the method of onset of labour has been grouped, the following aggregated groups have been used:

1. Spontaneous – includes spontaneous onset only.
2. Induced – includes surgical induction, medical induction and combination of surgical and medical induction.
3. Caesarean – includes caesarean section only.
4. Method of onset not applicable or not known.

Normal/Unassisted delivery

Normal delivery is one defined as:
(Normal delivery as spontaneous vaginal birth)
The following elements will constitute a normal delivery:

- Labour is not induced
- Oxytocin is not given to the mother
- Method of delivery is spontaneous vaginal (excludes caesarean, use of forceps, vacuum extraction)
- No artificial rupture of membranes
- Medicated pain relief assistance (ie narcotics, regional anaesthesia, perineal infiltration) is not given to the mother
- Episiotomy is not carried out.

An assisted delivery therefore would be one where one or more of these factors are used to assist the mother to give birth and the baby to be born.

It is not possible to produce a count of 'Normal deliveries' using HES data which meets all of the above criteria. Therefore, figures have been produced for each of the following and is defined as an unassisted delivery:

- Spontaneous onset of labour
- Method of delivery: Spontaneous vertex/ cephalic
- Episiotomy is not carried out.

This NOT the number of normal deliveries as it is not possible to identify all criteria relating to normal deliveries.

Number of babies (parity)

This field contains the number of babies delivered at the end of a single pregnancy. Both live and stillborn babies are counted. Until 2002-03, a maximum of 6 babies could be recorded in HES. It is now possible to record a maximum of 9 babies in HES.

Postnatal days of stay

This field contains the number of days between the baby's birth and the end of the finished episode. It is calculated from the first baby's date of birth and episode end date.

Status of person conducting delivery

This field normally provides the status of the person conducting the delivery. When a student delivers the baby, the code of the supervisor should be given. This item appears for each baby on multiple birth delivery records. The values it can take are:

- Hospital doctor
- General practitioner
- Midwife
- Other than above
- Not known.

Delivery method and OPCS codes for type of delivery

The NHS Maternity Statistics 2006-07 and 2007-08 publications use OPCS codes to identify delivery method rather than the HES delivery method field from the maternity tail. The table below compares the 2006-07 and 2007-08 total figures for delivery method using both the HES delivery method field and the OPCS codes. Although two of the fields for the delivery method field do show a higher number than for OPCS, the overall total excluding unknown figures show that 191,182 more records are being included using the OPCS code method.

	2006-07		2007-08	
Description	**OPCS code**	**HES Delivery Method field**	**OPCS code**	**HES Delivery Method field**
Total delivery episodes	629,207	629,207	649,837	649,837
Unknown delivery method	31,176	174,782	26,324	217,506
Spontaneous vertex	379,629	277,709	389,958	255,933
Spontaneous other	2,159	15,075	2,495	16,533
Forceps low	12,997	10,789	13,903	12,065
Forceps other	13,515	9,721	17,583	10,215
Ventouse	42,012	30,258	43,449	28,657
Breech	2,301	2,292	2,293	2,619
Breech extraction	271	401	318	403
Caesarean elective	56,997	41,921	60,458	40,236
Caesarean – other/emergency	88,054	61,070	92,948	58,907
Other delivery method	96	5,189	108	6,76

Below is a breakdown of the OPCS codes and the delivery method equivalent.

OPCS code	OPCS description	Delivery method code	Delivery method description
R17.1	Elective caesarean delivery, elective upper uterine segment caesarean delivery	7	Elective caesarean section (caesarean section before or at the onset of labour)
R17.2	Elective caesarean delivery, elective lower uterine segment caesarean delivery	7	"
R17.8	Elective caesarean delivery, other specified	7	"
R17.9	Elective caesarean delivery, unspecified	7	"
R18.1	Other caesarean delivery, upper uterine segment caesarean delivery nec	8	Other caesarean section (including emergency)
R18.2	Other caesarean delivery, lower uterine segment caesarean delivery nec	8	"
R18.8	Other caesarean delivery, other specified	8	"
R18.9	Other caesarean delivery, unspecified	8	"
R19.1	Breech extraction delivery, breech extraction delivery with version	6	Breech, including partial breech extraction (spontaneous delivery assisted or unspecified)
R19.8	Breech extraction delivery, other specified	6	"
R19.9	Breech extraction delivery, unspecified	6	"
R20.1	Other breech delivery, spontaneous breech delivery	5	Breech, including partial breech extraction (spontaneous delivery assisted or unspecified)
R20.2	Other breech delivery, assisted breech delivery	5	"
R20.8	Other breech delivery, other specified	5	"
R20.9	Other breech delivery, unspecified	5	"
R21.1	Forceps cephalic delivery, high forceps cephalic delivery with rotation	3	Other forceps, not breech, including high forceps and mid forceps (forceps with manipulation)
R21.2	Forceps cephalic delivery, high forceps cephalic delivery nec	3	"
R21.3	Forceps cephalic delivery, mid forceps cephalic delivery with rotation	3	"
R21.4	Forceps cephalic delivery, mid forceps cephalic delivery nec	3	"

OPCS code	OPCS description	Delivery method code	Delivery method description
R21.5	Forceps cephalic delivery, low forceps cephalic delivery 2		Low forceps, not breech, including forceps delivery not otherwise specified (forceps, low application, without manipulation)
R21.8	Forceps cephalic delivery, other specified	2	"
R21.9	Forceps cephalic delivery, unspecified	2	"
R22.1	Vacuum delivery, high vacuum delivery	4	Ventouse, vacuum extraction
R22.2	Vacuum delivery, low vacuum delivery	4	"
R22.3	Vacuum delivery, vacuum delivery before full dilation of cervix	4	"
R22.8	Vacuum delivery, other specified	4	"
R22.9	Vacuum delivery, unspecified	4	"
R23.1	Cephalic vaginal delivery with abnormal presentation of head at delivery without instrument, Manipulative cephalic vaginal delivery with abnormal presentation of head at delivery without instrument	1	Spontaneous other cephalic (cephalic vaginal delivery with abnormal presentation of head at delivery, without instruments, with or without manipulation)
R23.2	Cephalic vaginal delivery with abnormal presentation of head at delivery without instrument, non manipulative cephalic vaginal delivery with abnormal presentation of head at delivery without instrument	1	"
R23.8	Cephalic vaginal delivery with abnormal presentation of head at delivery without instrument, other specified	1	"
R23.9	Cephalic vaginal delivery with abnormal presentation of head at delivery without instrument, unspecified	1	"
R24.9	Normal delivery, all	0	Spontaneous vertex (normal vaginal delivery, occipitoanterior)
R25.1	Other methods of delivery, Caesarean hysterectomy	9	Other than those specified above, including destructive operation to facilitate delivery, and other surgical or instrumental delivery, for example, application of weight to leg in breech delivery
R25.2	Destructive operation to facilitate delivery	9	"
R25.8	Other methods of delivery, other specified	9	"

OPCS code	OPCS description	Delivery method code	Delivery method description
R25.9	Other methods of delivery, unspecified	9	“
	Unknown refers to delivery episodes where the main procedure/intervention OPCS code was not in the range R17-25 or where there was no OPCS code recorded		Not known

Home births, ectopic pregnancies and miscarriages

Although maternity HES was intended to cover all deliveries, very little HES data is available about those that occur at home and even less about those that occur in private hospitals, therefore this data is excluded from the publication. The Independent Midwives Association (IMA), which provides private midwifery care for both home and NHS hospital deliveries, has a database that holds similar information to that held in HES. General HES records for admitted patient care also include information about miscarriages and ectopic pregnancies where these result in a hospital stay. It is thought that most women with ectopic pregnancies are admitted to hospital, so these statistics present a fairly accurate picture of the incidence of ectopic pregnancy. For women who have miscarriages, the proportion admitted to hospital is not known. Estimates of miscarriages as a proportion of all pregnancies vary between 1 in 5 and 1 in 6; using these estimates and the hospital data from HES suggests that between a quarter and a third of miscarriages result in a stay in hospital. Some information about ectopic pregnancies and miscarriages are presented in Figures 2, 3 and 4.