

# Implementation Guidance for the Standard Maternity Record

## Digital Child Health Programme



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**for better health and care**

# Contents

<b>Introduction</b>	<b>4</b>
Background	4
<b>Purpose of Document</b>	<b>5</b>
<b>Audience</b>	<b>6</b>
<b>General Notes on the Standard</b>	<b>7</b>
<b>Terms Referenced</b>	<b>8</b>
<b>Mandatory, Required and Optional Data</b>	<b>9</b>
<b>Notes on Coding Structures</b>	<b>10</b>
<b>Standard Maternity Record Content</b>	<b>11</b>
<b>Encounter Types</b>	<b>12</b>
<b>Performing Professional, Date and Location</b>	<b>13</b>
<b>Metadata</b>	<b>13</b>
<b>Fetal Identifier</b>	<b>13</b>
<b>Guidance on Specific Headings</b>	<b>14</b>
Patient Demographics	14
Demographic History	14
Admission Details	14
Allergies and Adverse Reactions	14
Assessment Scales	14
Attendance Details	15
Clinical Risk Factors	15
Problem List	16
Discharge Details	16
Examination Findings	17
Family History	17
GP Practice	18
Relevant Past Medical, Surgical and Mental Health History	18
Immunisations	19
Individual Requirements	19
Information and Advice Given	20
Investigation Results	20
Legal Information	21
Medications and Medical Devices	21
Screening Review	21
Person Concerns, Expectations and Wishes	22
Personal Comment	22
Personal Contacts	23
Plan and Requested Actions	23

Pregnancy Episode Details	23
Procedures	24
Professional Contacts	24
Professional Summary/Comment	25
Referral Details	25
Safeguarding	25
Safety Alerts	26
Scan Details	26
Social Context	26
Participation in Research	28
Pregnancy Outcome Delivery and Birth	28
Baby Details (Woman)	28

# Introduction

## Background

The national maternity review<sup>1</sup> recommended that NHS England and the National Information Board (NIB) should support the national roll out of interoperable maternity records for professional use, combined with support for a digital tool (or personal health record) for women as an urgent priority.

Four recommendations were made, each of which relies on interoperability of health information, that is, information on an individual's pregnancy will need to be exchanged with a range of healthcare professionals in the network of maternity care outside of the hospital setting. These settings potentially all use different information systems. The information should also be made accessible to/shared with the woman.

In September 2016, in a report to the Maternity Transformation Board, NHS Digital made two recommendations in respect of a record data model and interoperability:

- (1) Assume a common approach to interoperability, personal health records and use of central digital infrastructure*
- (2) Begin work early on a core maternity record specification*

For interoperability of maternity information to be possible, there must be standardisation of content (data items), followed by an agreement on the technical specification for exchange. Even if a discovery phase recommends a 'view only' approach to professional and personal maternity records, this still requires a definition of what elements are to be viewable. Professional agreement on standard data is often difficult to achieve, so work needs to be started early, given the centrality of interoperability to the digital ambitions of the Maternity Review.

There is no such 'recognisable structure and format' agreed for maternity data, other than that required to support secondary uses of information via the Maternity Services Data Set (MSDS). Without a recognisable structure and format there is a lack of interoperability between maternity information systems (as different maternity supplier systems use different formats), and also a lack of interoperability between maternity information systems and information systems in other care settings. A standard record data model is simply the 'recognisable structure and format' needed, so that systems can 'talk to each other' in a common language.

Health and care information which is to be exchanged between information systems automatically (e.g. from maternity services GPs or between different providers of maternity care using different information systems) must be in a recognisable structure and format for the receiving system to correctly present the information to a healthcare professional in an understandable manner.

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<sup>1</sup> <https://www.england.nhs.uk/wp-content/uploads/2016/02/national-maternity-review-report.pdf>

## Purpose of Document

The purpose of this document is to outline initial guidance on the implementation of the Standard Maternity Record standards. This will prepare information system suppliers to be able to begin sharing information in the future via an interoperability approach, which is currently under development by NHS Digital. The guide has been created by NHS Digital and reviewed by the Professional Records Standards Body (PRSB).

This is initial guidance developed during the standards development phase, further implementation guidance describing how the data will be exchanged will be published by NHS Digital at a later date.

## Audience

This document is primarily aimed at healthcare professionals, Chief Information Officers (CIOs), Chief Clinical Information Officers (CCIOs), Chief Nursing Officers (CNOs), commissioners of maternity services and managers in provider organisations and information system suppliers of maternity services.

The Maternity Record standard describes the set of information that is currently exchanged (mostly via paper-based systems) between healthcare professionals and those supporting the care of a woman.

The standard is provided in three documents:

**Standard Maternity Record Specification** – this specifies the format of an electronic care record, including the record headings and subheadings which provide the standardised structure for that record.

**Standard Maternity Data Model Specification** – this provides the information models, setting out the detailed content for the data items, including values and business rules used to support the creation of Fast Healthcare Interoperability Resources (FHIR) profiles. These information models will be used to populate the maternity record and so the information models also provide the standardised values and business rules needed for the care record.

**Technical specification** – this document is currently a work in progress. Once complete, it will provide the technical specification to allow the information outlined in the data model specification to be exchanged as electronic messages. These will be available on GitHub in draft and will be updated as the development cycle continues.

The standard is being issued so that providers of maternity services can assess whether the electronic systems they are using are compliant with the standard. Compliant providers will be able to transition to an interoperable model of care and move away from the exchange of information on paper.

Suppliers of electronic information systems used to support maternity services need to review their existing electronic health and care records and associated data models to ensure they are compliant with the Standard Maternity Record. If not, they will need to transition to the Standard Maternity Record and Standard Maternity Data Model Specifications. Suppliers will also need to review the FHIR specifications to understand how maternity information will be exchanged in future and to prepare for the introduction of interoperability based on the new Maternity Record standard.

The Standard Maternity Record Specification and Standard Maternity Data Model Specification will form part of a new Information Standards Notice (ISN); due to be issued in the beginning of 2019.

## General Notes on the Standard

The scope of the Standard Maternity Record is the set of information that is currently exchanged (mostly via paper-based systems) between healthcare professionals and those supporting the care of a woman.

The standard has been created to ensure a common structure, which if adopted universally, will make it easier for women and healthcare professionals to navigate around an electronic health record, where information is drawn from different care settings. This will enable the context and hence the meaning of information to be preserved when communicating between different care settings and information systems, thus enabling information re-use.

NHS Digital is currently designing the national infrastructure to support the interoperability of maternity information; this is anticipated to be live in 2019. This will ensure that information can be exchanged between systems digitally and no longer exchanged on paper.

It is recognised that local infrastructure to support interoperability is also being built and may be available sooner than 2019. The three specifications outlined in the previous section are needed to ensure that local and national infrastructure can send information to where it is needed.

The NHS is implementing SNOMED CT across all care settings. SNOMED CT should be communicated, where recorded, and medications should use the NHS Dictionary of Medicines and Devices (dm+d).

Some SNOMED CT is included within the Standard Maternity Data Model Specification, but further development is underway and will be published in a subsequent version of the Standard Maternity Data Model Specification in the near future.

On adoption of the standard, only information recorded at a point in time should be communicated, not what was recorded previously as this information will already be available in the record.

Where no information has been recorded, a blank record should not be sent, except for mandatory items where a 'null' record should be sent, with explanatory coded text e.g. 'no information recorded'.

## Terms Referenced

This document frequently refers to a number of terms which are defined as detailed below:

Term	Description
Data Item	This is a label for the unit of data contained in a record heading which describes an attribute. The data item relates to the data item stored within a field. For example, "British, mixed British" and "Any other mixed background" are data values in the "Ethnicity" field element of the Patient Demographics record heading.
Element	This is a label for sub-headings in relation to a specific record entry. For example, a diagnosis entry may be composed of the following elements: 'diagnosis/symptom', 'stage of disease', 'comment'.
Episode	This is a label for the episode of care. In this instance, this is the maternity episode which is a period of antenatal, labour and delivery and postnatal care. A maternity episode may be associated with fetus episodes, hospital provider spells, labour and deliveries, maternity domiciliary visits and midwife episodes. A maternity episode will end following discharge from maternity services for the mother.
Heading	This is a label for a high-level heading within the record. For example, 'medication and medical devices' and 'diagnoses' are headings. This could also be referred to as a 'container' or 'section'. A heading will appear in a record only once.
Record	This is a label for the overarching record as a whole. In the instance of the Standard Maternity Record, this is the combination of all the headings listed in <i>Figure 1: Standard Maternity Record headings</i>



## Mandatory, Required and Optional Data

Unlike other published PRSB projects, the Standard Maternity Record Specification does not include mandatory, required and optional information at the individual record heading level. Systems suppliers who adopt the standard need to be capable of being able to record all elements under each of the overall record headings.

The Standard Maternity Data Model Specification gives detailed guidance as to how each value should be recorded within the element field and in what format. Information system suppliers should ensure that it is possible to record all the information set out in the Standard Maternity Data Model Specification.

This section defines what is meant by 'mandatory', 'required' and 'optional' in a Standard Maternity Record, as detailed in the Standard Maternity Data Model Specification:

- **Mandatory** = The information must be present, or an appropriate statement included should the information not be present, to allow the information to be recorded and stored in the record.
- **Required** = Where the information is present in the record, it must be recorded and stored.
- **Optional** = Local providers can elect to record and store these items.

The order in which headings appear in the Standard Maternity Record can be agreed locally.

## Notes on Coding Structures

The Personalised Health and Care 2020 framework for action<sup>2</sup> recommends the use of SNOMED CT and the Dictionary of Medicines and Devices (dm+d).

For this reason, NHS Digital are using SNOMED CT coding, where appropriate, throughout the Standard Maternity Record. Where this is not appropriate national coding from the NHS Data Dictionary has been used.

### Please note:

- GP systems are due to have been migrated to SNOMED CT by October 2018.
- It is recognised that there may be changes to the SNOMED CT codes referenced in the Standard Maternity Data Model Specification based on aligning the standard to the current work through INTEROpen<sup>3</sup>. INTEROpen is an OPEN collaboration of individuals, industry, standards organisations and health and care providers, who have agreed to work together to accelerate the development of open standards for interoperability in the health and social care sector. INTEROpen has been leading on development and curation of the Care Connect FHIR profiles. CareConnect was created by the INTEROpen community as a brand to describe:

*‘A library of profiles (resources and interaction patterns) of the HL7® FHIR® standard that implementers can adopt to simplify integration and interoperability within UK Health and Social Care’.*

- The mapping of the Standard Maternity Record Specification and associated data model may be updated to align to the standards developed by the INTEROpen community.
- The ambition for the future is for SNOMED CT and dm+d to be the only clinical coding schemes in use in the NHS by 2020.
- CareConnect<sup>4</sup> profiles include coding wherever it is appropriate to do so with free text as an additional item or as a comment. The Standard Maternity Data Model Specification specifies where free text should be carried with the associated appropriate code and also where free text narrative would be more appropriate than use of a code.

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<sup>2</sup> <https://www.gov.uk/government/publications/personalised-health-and-care-2020>

<sup>3</sup> INTEROpen ([www.interopen.org](http://www.interopen.org)) is an OPEN collaboration of individuals, industry, standards organisations and health and care providers, who have agreed to work together to accelerate the development of open standards for interoperability in the health and social care sector.

<sup>4</sup> A library of profiles (resources and interaction patterns) of the HL7® FHIR® standard that implementers can adopt to simplify integration and interoperability within UK Health and Social Care.

# Standard Maternity Record Content

The content of the Standard Maternity Record is aligned with the Professional Record Standards Body (PRSB)<sup>5</sup>/Academy of Medical Royal Colleges (AoMRC)<sup>6</sup> record standards where possible. Where PRSB/AoMRC headings did not exist, amendments were made to existing headings or new headings were created to fulfil the standard maternity record use case. To provide the context for this implementation guidance, the set of headings included in the Standard Maternity Record is provided in the diagram below. Detailed information models are available via the NHS Digital website and on the PRSB website.

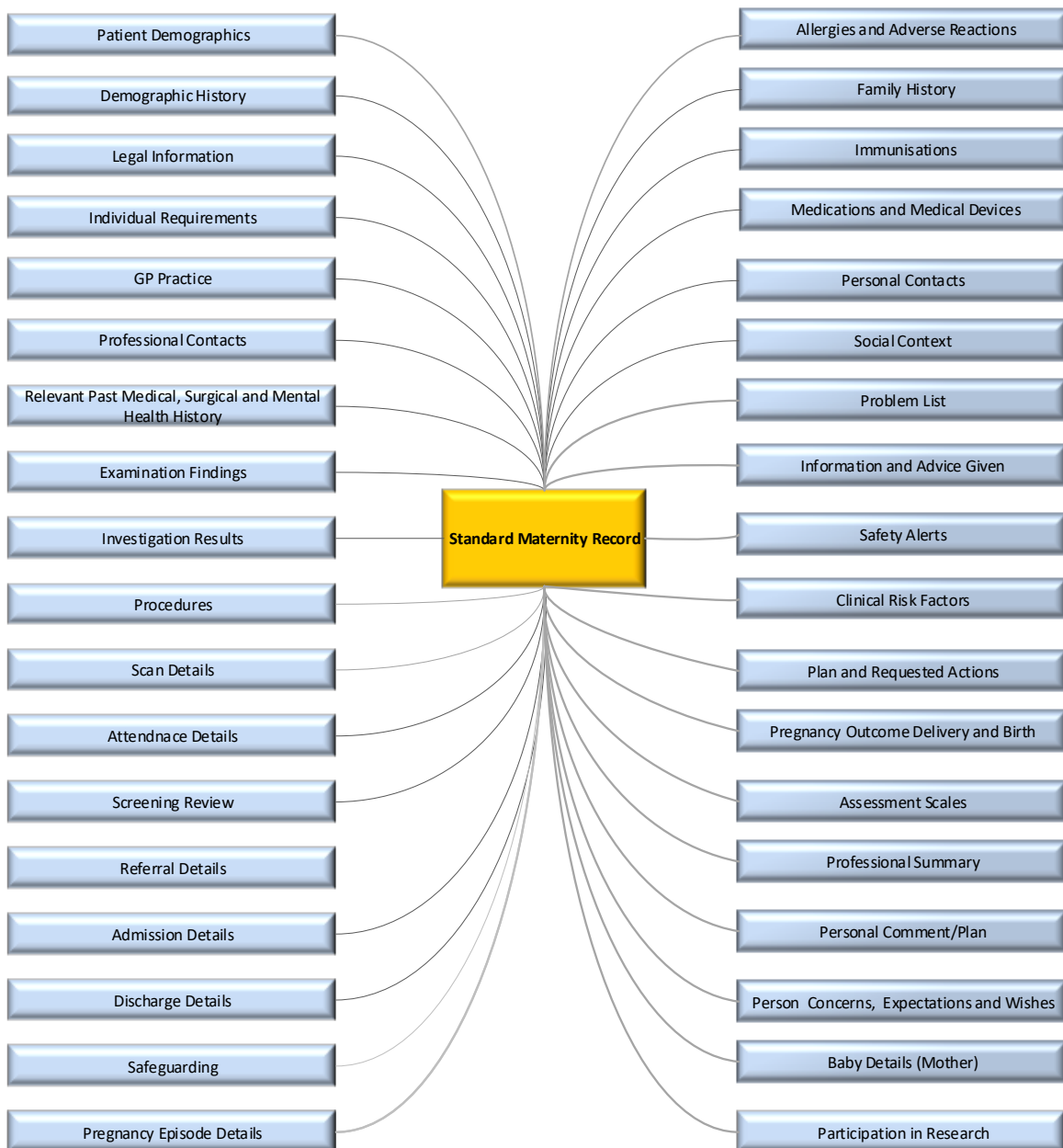


Figure 1: Standard Maternity Record headings

<sup>5</sup> <https://theprsb.org/standards/>

<sup>6</sup> <http://www.aomrc.org.uk/publications/reports-guidance/standards-for-the-clinical-structure-and-content-of-patient-records-0713/>

# Encounter Types

A number of ‘encounter types’ were identified as being essential in the pregnancy episode and form part of the pregnancy pathway for the woman. ‘Encounter types’ highlight some of the key health and care interventions that are expected to occur during a woman’s pregnancy episode and show what information would typically be recorded. The ‘encounter type’ is used to tie together the different types of health and care information that may be recorded during a maternity encounter or contact. The specific encounter types identified were:

- Antenatal Booking
- Antenatal Admission
- Antenatal Contact
- Screening Review
- Delivery
- Post Delivery/Birth Review
- Postnatal Contact

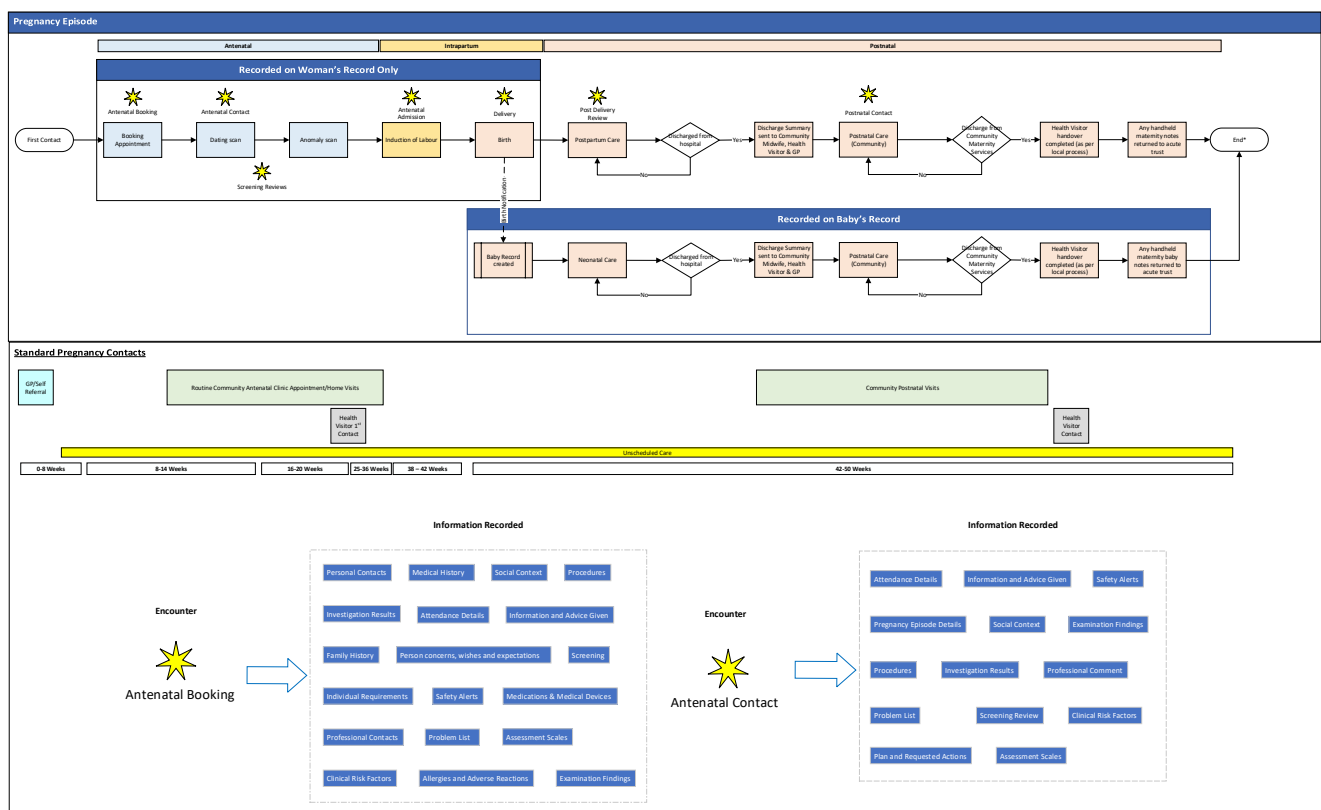


Figure 2 - Pregnancy Episode Timeline

Figure 1 shows the typical activities that occur as part of the pregnancy episode. The diagram also highlights some of the headings that may be used to record some of the clinical activities that typically take place at these ‘encounters’. System suppliers may create templates in their systems to capture these interventions e.g. the antenatal booking however,

it is imperative that each of the data items is also recorded under the correct record specification heading.

## Performing Professional, Date and Location

It is only necessary to record the Performing Professional when the professional entering the data is different to that who performed the clinical activity. For example, a clerical worker entering the information of behalf of a healthcare professional would enter the professional details of the professional who undertook the clinical activity.

Where it is important to identify the person who undertook clinical work, the professional, date and location details **MUST** be entered. The professional undertaking clinical work may be a separate person to that entering the data on the system. The time stamps in the record should be recorded in 'Coordinated Universal Time (UTC) which is the primary time standard by which the world regulates clocks and time.

## Metadata

It is expected that for any information recorded under the record headings that there will be some minimum mandatory information (audit trail) which will essentially be derived in the background from the IT system the data is recorded in. This audit data is essential as it will allow for information which is not defined as being mandatory in the Standard Maternity Record Specification and specified in the structured headings to be recorded. It is not expected that this data should be carried across into the clinical record, but this should form part of an audit trail which will display in a system workflow. The metadata will differentiate between the person who performed an action and the person who inputted the data.

## Fetal Identifier

The fetal identifier should be used in all circumstances where information is being recorded in the maternal record which is directly related to the fetus e.g. a diagnosis as a result of screening such as downs syndrome. This information should always be transferred to the baby's NHS number in the result of a live or still birth. In England, a baby born (live or still born) on or after 24 weeks gestational age must be registerable and issued with an NHS number.

## Guidance on Specific Headings

Guidance on completion of specific data items and their format is included in the Standard Maternity Record Specification and so is not replicated here. The guidance below is supplementary to the Standard Maternity Record Specification.

### Patient Demographics

- NHS number (or equivalent, e.g. Community Health Index [CHI] number in Scotland) is mandatory, but with the option to record 'not known' or 'not available'. Existing national guidance should be followed, including how to handle patients without an NHS number, e.g. overseas visitors, services personnel, prisoners etc.
- Spine compliant systems are needed to obtain traced NHS numbers. Where an organisation does not have a system linked to the Personal Demographics Service (PDS), other demographic fields will need to be used, with local person identity matching software.
- Hospital numbers are not unique so either avoid including them or reference the organisation where the number was generated.

### Demographic History

- The information under this heading will be populated from the PDS using the history flag, which is used to indicate whether or not the information is historic data.

### Admission Details

- This heading allows for the recording of all instances where a woman is admitted to a healthcare setting during the maternity episode and should include the relevant site Organisation Data Service (ODS) code where applicable.

### Allergies and Adverse Reactions

- A record should be provided of allergic and adverse reactions relevant to the woman. Coded information on causative agents is important to healthcare professionals to enable safe prescribing of medications.
- When an individual is diagnosed with an allergy related condition (e.g. anaphylactic shock or urticarial skin rash) this will be entered in addition into the diagnosis field in the healthcare system.
- Guidance on good practice recording of allergies and adverse reactions is provided by the National Institute of Care Excellence (NICE).<sup>7</sup>

### Assessment Scales

- This heading allows for the recording of the results of any assessment tools completed. This may include, but is not limited to, depression screening tools such as PHQ-9 or GAD-7 and alcohol screening tools such as AUDIT. The results of any assessments completed will be displayed under this heading.

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<sup>7</sup> <https://www.nice.org.uk/guidance/CG183/chapter/1-Recommendations>

- This heading includes the Maternity Pathway Indicator which is used to determine the clinical pathway the clinician has placed the woman on. This can be changed throughout the stage of pregnancy depending on risk factors through clinical assessment and must be recorded at each stage.

### Example List

This is an example list of assessment scales that may be used in the maternity setting and may be recorded under this heading:

Assessment Scale
Patient Health Questionnaire-9
Generalised Anxiety Disorder Questionnaire
Mood and Feelings Questionnaire
Venous Thromboembolism Risk Assessment Tool
Anxiety Identification Questions
Alcohol Screening Tool - AUDIT - C
Edinburgh Postnatal Depression Scale (EPDS)
Modified Early Obstetric Warning Score (MEOWS)
Post-Traumatic Stress Disorder Impacts of Events Revised Scale
Maternity Pathway Indicator

## Attendance Details

- A record should be provided of the details of each professional contact with the woman. This will include home visits, hospital outpatient visits and clinic visits.
- This heading includes the ability to add additional professionals included in the contact and any additional persons accompanying the woman.

## Clinical Risk Factors

- This heading includes any relevant clinical risk factors associated with the development of a condition that pose a risk to the woman or fetus.
- This heading includes a pull through of any specific assessments and actions taken to reduce the clinical risk as part of a clinical risk assessment. It might also include a pull through of clinical risk factors recorded elsewhere.
- It is important to note that risk factors may change over the lifecycle of the maternity episode/pregnancy stage.

### Example List

This is an example list of clinical risk factors that may be recorded in the maternity setting and may be recorded under this heading:

Clinical Risk Factor
Maternal age 40 and over at EDD or Maternal age 16 and under at booking
Anaemia Hb < 9.0
Endocrine disorders including diabetes
Body Mass Index (BMI) 35 kg/m <sup>2</sup> at booking

Previous Pregnancy Birth weight at term <2.5kg or >4.5kg
Previous Pregnancy Congenital abnormality, Stillbirth or neonatal death
Previous Pregnancy Preterm delivery <34/40
Severe pre-eclampsia/HELLP/eclampsia
Genetic or inherited disorder
Psychiatric disorder (requiring secondary care, admission, suicide attempt or on current medication)

## Problem List

- This heading allows for the recording of all relevant diagnoses and problems and issues.
- The format of the onset date of the diagnosis recorded should allow for partial dates, as the exact date may not be known.
- This is a summary of problems that require investigation or treatment. This would include significant examination findings, symptoms and signs, which are likely to have relevance and are not a diagnosis.
- It is recommended that coded items are included in the values for problem and issues.
- The naming of this heading may be displayed differently in a system if it is felt that the current wording of 'problem list' has negative connotations.
- Any dietary habits considered a problem or issue should be recorded under this heading.

### Example List

This is an example list of conditions, problems and issues that may be recorded in the maternity setting and may be recorded under this heading:

Conditions
Social concerns
Mental Health concerns
Substance misuse
Type I or II Diabetes
Incompetent cervix
Hypertension requiring medication
Auto immune disorder
Cardiac disease
Haematological disorder, Thromboembolic

## Discharge Details

- The maternity record should allow for the recording of all instances that a woman is discharged from a healthcare setting. The discharge details should include ODS codes of the discharging organisations.



- The information recorded here is complementary to the discharge summary. Any transfer of care or movement between services can be recorded using existing PRSB transfer of care headings (i.e. discharge summary, EC discharge summary etc).

## Examination Findings

- This heading includes any findings from an examination conducted by a healthcare professional.
- Information systems should link an examination finding to a diagnosis, where appropriate.
- Fetal examinations recorded under this heading will need to be linked to the 'fetal identifier'.
- The examination findings heading is specifically designed for healthcare professionals who work within the maternity setting who wish to record the examinations of various biological systems, e.g. cardiovascular, head and neck etc.
- Mental health assessment scales should be pulled through from the Assessment Scales heading to this heading to allow appropriate comment.
- This heading will include details of the damage to the vagina/cervix which may require surgical repair.
- A number of data fields are marked as required but will be mandatory at some appointments. It is up to local settings to decide when a required element is upgraded to mandatory.

## Family History

- There will be one 'family history' instance for the woman which can be used to record any relevant family/genetic history.
- 'Family' in this context refers to blood relations only. It is important to identify where the woman is not the biological mother.
- There will be one 'family history' instance for the fetus(es) which can be used to record any relevant family/genetic history.
- The fetal record allows for information to be recorded about the genetic relations of the fetus e.g. egg and sperm donors.
- The comments element can be used to make it clear where the biological mother and biological father are blood relations if necessary.
- Any family history recorded against the fetus during the pregnancy within the woman's record will need to handle the context and relate to the subject of the record i.e. the unborn baby.

### Example List

This is an example list of family history entries that may be recorded in the maternity setting and may be displayed under this heading:

#### Family History

Family History: Allergies

Family History: Heart Conditions
Family History: Not known - Adopted
Family History: Diabetes
Family History: Hypertensive disorders
Family History: Sudden Infant Deaths, Stillbirth or Multiple Miscarriages
Family History: Haematological disorders
Family History: Congenital disorders
Family History: MCADD
Family History: Mental health disorders e.g. Severe Perinatal Mental illness, Manic Depression/Bipolar illness

## GP Practice

- If a woman is not registered with a GP practice, then the GP practice record entry should appear in the Standard Maternity Record with the text "No known GP practice".
- Normally women are registered with one GP practice. However, sometimes a GP serves a patient on a temporary basis and so may also need to access the Standard Maternity Record. In this instance, both permanent and temporary GP practices should be recorded.
- A woman may choose to opt out of registering with a GP practice. System design should enable this to be recorded to accommodate this personal requirement to refrain from GP registration.

## Relevant Past Medical, Surgical and Mental Health History

- This heading allows for the recording of the woman's significant medical, surgical and mental health history. Including relevant previous diagnoses, problems and issues, procedures, investigations, specific anaesthesia issues, etc (will include dental and obstetric history).
- Medical history is recorded under 'relevant past, medical, surgical and mental health history' in coded and free text, and this information is shared both within maternity settings and other care settings outside maternity.
- Midwifery records are subject to the same reliability provisos as other medical records in other clinical settings. The information recorded by the midwife does not automatically become part of a wider shared record. It is first necessary for a clinician to validate a record, e.g. medical history before subsequent use in another setting/system. As in other clinical settings where there is overwrite overwriting of a past entry of for example medical history there will be an audit trail of this and associated accountability. It is also noted that research shows that patient provided information is often more accurate than that in existing medical records.
- Medical history should include recording at an appropriate level to reflect the certainty e.g. symptom or problem if unsure of a diagnosis. In the absence of a diagnosis or disorder symptom or symptoms should be recorded.
- Unconfirmed or excluded diagnoses should not be recorded in structured coded fields but may be listed in free text in the comments field. The differential diagnoses should

only be recorded in free text in the comments field, and not in a coded diagnosis field until confirmed with confidence. The HIU and PRSB are working on a project to develop professional guidance for recording of medical diagnosis that should provide further guidance in this area by the end of the year.

- Any confirmed diagnosis past or present should be recorded in the problem list heading. However, if the woman is unclear the this should be recorded as a history of in this heading.
- Obstetric history is designed to be used for each birth recorded for each child associated with that birth. The length previous labour should be stored as minutes and displayed as weeks and days.
- The information recorded under this heading as part of the subheadings determined in the record structure may be presented in a system user interface as a tick box with listed example conditions. This could be used as a prompt/decision support to support a midwife taking a woman's medical history. The most common items likely to be recorded here under the respective subheadings should adhere to NICE guidelines.<sup>8</sup>
- Assisted conception can be recorded under gynaecology history (relevant past medical, surgical and mental health history). This information can be linked to the dataset by NHS number if the treatment took place in England. However, it is important to consider the legal implications of sharing this information. This would require clinical review.

## Immunisations

- This heading allows for the recording of all immunisations both administered during pregnancy and those given historically.
- The vaccinations recorded must be in line with nationally agreed naming and utilisation conventions.
- All discrete data elements associated with any immunisation administered (including travel vaccinations) should be recorded in this heading.
- This heading allows for retrospective recording any immunisations as reported by the woman, including those given abroad.
- A generic common vaccination information model suitable for all types of vaccination is still under development and this may result in changes being made to the maternity vaccination information model in the future. Any changes would be incorporated in an updated version of this model if necessary.

## Individual Requirements

- This heading allows for the recording of any of the individual requirements of the woman.
- The data options in this heading comply with the NHS England Accessible Information Standard which sets out a specific, consistent approach to identifying, recording, flagging, sharing and meeting the information and communication support needs of

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<sup>8</sup> NICE guidelines - <https://www.nice.org.uk/guidance/cg62>

patients, service users, carers and parents with a disability, impairment or sensory loss. Further information on the Accessible Information Standard can be found here<sup>9</sup>

## Information and Advice Given

- This heading allows for the recording of individual requirements that need to be met to ensure that the woman receives care and support, e.g. interpreter for woman, wheelchair access for carer to attend appointments’.
- This heading should be used to record advice given in relation to the pregnancy and other health promotion provided by healthcare professionals during the maternity episode.
- Where the woman is provided with literature (e.g. pamphlets) there is no need to provide details of the information contained in the literature e.g. simply state that the woman was provided with a pamphlet.

## Investigation Results

- This heading is used to record the results of investigations. Investigations undertaken where results are not available are recorded under plan and requested actions. The action is the request to the lab to undertake analysis. Therefore, this section does not record investigations undertaken where results are not available.
- Investigation results received from laboratories may be auto populated into this heading, but it is envisaged that in the main these will be supplied in a flat file format. If required, these may be re-keyed to allow for data analysis.
- Important or relevant results should be included in the ‘clinical narrative’ as text, together with the reason that the test was carried out.

### Example List

This is an example list of investigations that may take place in the maternity setting and may be recorded under this heading:

Investigation
Blood Group Antibodies
Rhesus Group
Full Blood Count
MRSA
Urinalysis
Mid-Stream Urine
OGTT
Hepatitis B
Fetal Blood Group
Cord Blood Gases

<sup>9</sup> <https://www.england.nhs.uk/ourwork/accessibleinfo/>

## Legal Information

- This heading allows for the recording of any relevant legal information including Deprivation of Liberty Safeguards, Looked After Child status and Mental Health Act sections.
- If there is no end date on any of the legal information recorded under this heading, then this should be considered active.

## Medications and Medical Devices

- This heading allows for the recording of medication. The purpose of the record is to record medication taken prior to and at conception and current medications (snapshots). The relevant transfer of care models can be used for referral, discharge, and outpatient medication, which would be communicated as part of these transfers of care.
- The medication heading is designed to allow the recording of medication. This may be as a result of the woman informing the healthcare professional what medication she is on or has been on in the past. The heading also allows for the recording of medication changes that are made prior to the discharge of the woman. This heading is not suitable for use in the dispensing or administration of medication in the maternity setting.
- Each attribute of the medication item (e.g. name, route, dose, frequency etc.) should be presented in a clear and logical format (e.g. in tabular form). See National Patient Safety Agency (NPSA) guidance.<sup>10</sup>
- Parsable dose directions, structured dose directions cluster and structured dose timing cluster are placeholders for a future 'advanced' structured dose syntax solution. There is insufficient information to detail these further at present, but the fields have been included as optional within the data specification.

## Screening Review

- It is recommended for the Standard Maternity Record that each of the current national antenatal screening programmes has its own sub-heading under a 'screening review' heading. However, systems need to be able to implement a generic model which can be updated should the screening programmes change in the future.
- This heading allows for the recording of the outcome of screenings, rather than the full results. The full results will be structured in the appropriate heading (e.g. 'procedures' for chorionic villus sampling (CVS) and amniocentesis or 'investigation results' for blood tests).
- The current screening pathway for the woman and newborn child is shown in *Figure 3* below. Further information regarding the pathway for each of the national antenatal screening programmes can be found in the screening service specifications on the PHE website.<sup>11</sup>

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<sup>10</sup> <http://www.nrls.npsa.nhs.uk/resources/collections/design-for-patient-safety/?entryid45=66713>

<sup>11</sup> <https://phescreening.blog.gov.uk/2017/08/14/2017-to-2018-screening-service-specifications-the-main-changes/>

- The outcome of the 'venous sample performed to screen for sickle cell and thalassaemia' will be recorded from the blood test result. This will be entered by the midwife until systems are integrated.
- The screening review may be repeated during the pregnancy, i.e. there may be more than one diabetic screening record.
- Professional name recorded as part of the Diabetic Eye Screening Programme should be used to record the details of the person who graded the image. The name will be entered by the midwife from the screening report until the systems are integrated.

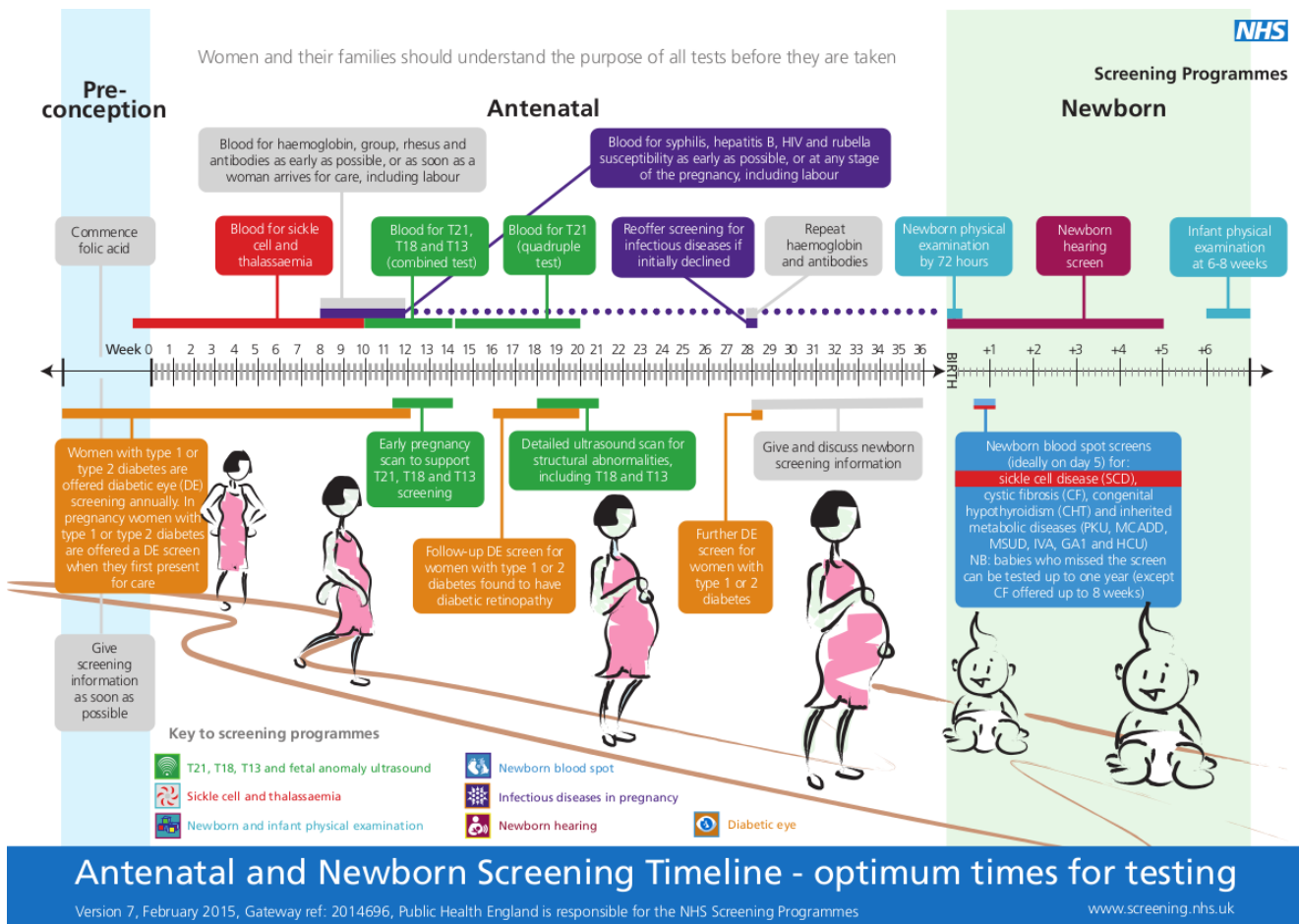


Figure 3: Antenatal and Newborn Screening Pathway

## Person Concerns, Expectations and Wishes

- This heading allows for the recording of the woman's birth plan if required. It is important to note that the way in which a birth plan is displayed may be dependent on local implementation. The source system may populate the management plan (plan and requested actions) with standardised care plans based on risks etc.

## Personal Comment

- This heading allows for the recording of all free text comments made by the woman. Please note, this heading is not designed to be completed by a health professional,

but the information will be made available in the future via exchange of information from an electronic Personal Health Record (ePHR).

## Personal Contacts

- This heading allows for the recording of a list of personal contacts (e.g. family, friends, relatives etc.)

## Plan and Requested Actions

- This heading allows for the recording of planned investigations, procedures and treatment for the woman's identified conditions and priorities.
- It is envisaged that this heading will be used to record the clinical details of the maternity management plan. This will be updated as and when required. It is important to note that the way in which the management plan is displayed may be dependent on local implementation.
- This heading allows for the recording of the refusal of blood products if required. It is recommended that the refusal of blood products should also be recorded as a clinical risk factor in the correct context.
- Where relevant, details of follow up arrangements should be included in the 'plan and requested actions' heading, identifying who will be responsible for them.
- The plan should make clear who is expected to take responsibility for actions.
- Shared decision-making principles should apply to the development of the plan and where the professional and mother's opinions differ, this should be recorded under the heading 'professional summary'.
- The plan could be presented in various ways in the maternity record system to prompt complete information to be recorded e.g. table, best practice prompts, etc.

## Pregnancy Episode Details

- This heading allows for the recording of information related to the pregnancy episode and includes a start and end date which allows for the opening and closing of the pregnancy episode.
- The 'pregnancy identifier' is used to tie together data relating to a specific pregnancy. This allows specific contacts and activities carried out (e.g. scans, tests, observations, findings, diagnoses) to be linked back to the intervention for that pregnancy.
- The 'pregnancy identifier' is used as a national identifier to uniquely identify each pregnancy that a woman may have. If this identifier is not currently autogenerated then it is suggested that the NHS number of the mother is used with a locally defined appendage.
- The 'fetal identifier' is used as a national unique identifier to allow different data to be recorded on each fetus in cases of multiple pregnancy. This is a unique number that is different to the NHS number. If this identifier is not currently autogenerated then it is suggested that a locally generated number (e.g. hospital number) which ensures a consistent approach. Any information recorded against this identifier during the pregnancy will need to be linked and transferred to the baby to ensure information is not lost in the mother's record.

- The ‘fetal identifier’ allows individual fetuses/babies to be identified in the event of multiple births, and in turn allow specific conditions to be attributed to specific fetuses/babies and linked to specific interventions.

## Procedures

- All procedures undertaken during the maternity episode should be included during the maternity episode, including:
  - a. diagnostic as well as therapeutic procedures
  - b. procedures carried out on different days during the hospital stay.
- Outcomes or results of procedures should be recorded in the ‘comments’ field.
- Whilst hospitals use Classification of Interventions and Procedures (OPCS) codes for procedures, these cannot be used by GP practices, so should not be included in discharge summaries. The text associated with the code should be communicated and matched to the relevant SNOMED CT code, rather than the OPCS code.
- Adverse reactions to anaesthesia should be recorded in the ‘allergies and adverse reactions’ heading, rather than the ‘procedures’ heading, but should be displayed in both headings under the ‘specific anaesthesia issues’ element. The anaesthesia issues recorded in this heading could include for example, “short neck, difficult to intubate” and the actual intubation grade.
- The date and time of rupture of membranes is a data field which would be used if a procedure for the rupture of membranes was recorded and had taken place.

### Example List

This is an example list of procedures that may take place in the maternity setting and may be recorded under this heading:

Procedure
Amniocentesis
Sampling of chorionic villus (CVS)
External cephalic version
Artificial rupture of membranes for augmentation of labour
Induction of Labour - Prostaglandin
Induction of Labour - Oxytocin
Artificial rupture of membranes
Episiotomy
C-Section, forcep assist
C-Section, low transverse

## Professional Contacts

- The heading allows for the display or recording of healthcare professional contacts.
- This heading could be used to identify women who have more than one service provider e.g. those women who book at multiple sites.



## Professional Summary/Comment

- This heading is designed to be used to allow the healthcare professional to record a narrative summary (clinical notes) of an encounter. This may include interpretation of findings and results, opinion and specific action(s). Planned actions will be recorded under 'plan'.
- This heading should be used to record day-to-day/ case notes.

## Referral Details

- This heading is designed to be used to indicate that a referral has been made. It is not the referral itself.
- The 'referrer details' should be copied from the referral or transfer of care where possible.
- Coded text 'self-referral' should be used where the woman is not referred or transferred from a healthcare organisation. Where 'self-referral' is recorded, the 'referrer details' data items should be left blank.

### Example List

This is an example list of 'referrals to' organisations that may take place in the maternity setting and may be recorded under this heading:

Referral to
Referral to dental service
Referral to diabetes service
Referral to dermatology service
Referral to physiotherapy service
Referral for vulnerable adult investigation
Referral to psychology service
Referral to haematology service
Referral to safeguarding team (for example FGM, Domestic Abuse)
Referral to social services (e.g. CAF Form commenced)

## Safeguarding

- This heading is where any concerns, risks or issues in relation to safeguarding are recorded in relation to the mother.
- The 'safeguarding heading' could potentially contain sensitive information. Therefore, sufficient role-based access controls should be in place to ensure this information is only shared with those care professionals where there is a need to do so .
- There may be situations where it not advisable to share information in this heading with the person to whom it relates. Appropriate policies and technical solutions need to be in place for these situations.

## Safety Alerts

- This heading is subject to change pending the outcome of a review by the PRSB of the heading 'safety alerts'.
- The 'safety alerts' heading could potentially contain sensitive information. Therefore, sufficient role-based access controls should be in place to ensure this information is only shared with those care professionals where there is a need to do so.
- There may be situations where it not advisable to share information in this heading with the person to whom it relates. Appropriate policies and technical solutions need to be in place for these situations.
- All information needs to be reviewed on a regular basis, but it is particularly important for this type of information, given its sensitive nature. There must be mechanisms in place to validate the information in this heading and for it to be reviewed regularly.
- At this stage, it is recommended the 'safety alerts' are recorded as free text.

## Scan Details

- This heading contains details of any scans offered to the woman throughout the pregnancy.
- The 'scan details' will include the details of the scan, including the scan report, which contains the associated results (measurements and observations etc) found.
- The estimated delivery date (EDD) confirmed by a scan should supersede and take precedence over the EDD date generated via the woman's last menstrual period (LMP). It is important that EDD date confirmed via a scan updates the EDD method as well as EDD date in a system.
- Crown–rump length measurement should be used to determine gestational age. If the crown–rump length is above 84 mm, the gestational age should be estimated using head circumference.<sup>12</sup>

## Social Context

- This heading is split into two parts; one section details any family and household factors and the other personal factors about the woman's social context.
- Social factors within the household, including the household composition and environmental factors, should be detailed within this section. Factual concerns about the environment, which are not specifically safeguarding, but may impinge upon it, can be recorded here. For example, serious lack of hygiene in the home, dog appears vicious etc.
- Previous and current drug and substance use should be recorded under this heading. This should include all substances that are considered harmful to the woman and misused including illegal drugs and prescription drugs such as methadone.

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<sup>12</sup> <https://www.nice.org.uk/guidance/cg62/chapter/1-guidance>

- With regards to alcohol related information, the drinking habits prior to any pregnancy should be considered. Where a person has been pregnant twice in the period prior to the current pregnancy, then alcohol consumption prior to the first pregnancy should be recorded. The purpose of this is to record normal drinking patterns, i.e. when not pregnant.
- If it is identified that the woman's partner is subject to heavy alcohol consumption, it is recommended that they should be referred to specialist services. However, this information would be based on the partner's consent and the information would be subsequently added to the partner's record not the woman's.
- Current alcohol consumption, alcohol consumption prior to pregnancy and alcohol consumption during the first few weeks of pregnancy should be recorded. Where frequency of alcohol consumption and frequency of binge drinking is greater than one a week then actual number of days should be recorded.
- The alcohol and tobacco information models used as part of the Standard Maternity Record are based on models developed outside the maternity project but have been adapted by specialists to suit use in the maternity care setting.
- When recording the result of the carbon monoxide level as part of the CO testing, the numeric result value must be recorded. If there is no result, CO screening declined must be recorded.
- Whether a woman attended a smoking cessation referral appointment can be recorded under the 'smoking' 'comment' section of the record.
- This heading may be used to record complex social factors as defined by NICE Guidance<sup>13</sup>, but it is not limited to this and may include social risk factors such as poor family support.

### Example List

This is an example list of types of drug/substances that may be recorded under this heading:

Drug/substance
Ecstasy
Heroin
Inhalants(Glues/Solvents/Aerosols)
Ketamine
Phencyclidine (PCP)
Sedatives/Narcotics
Opiates/opioids
Crack cocaine
Cocaine
Cannabis

<sup>13</sup> NICE - <https://pathways.nice.org.uk/pathways/pregnancy-and-complex-social-factors-service-provision>

## Participation in Research

- This heading should be used to flag participation in a clinical trial. This should include the name of the research trial that the woman is actively engaged in and, if available, the URL with further details of the trial.

## Pregnancy Outcome Delivery and Birth

- This heading should be used to record the outcome of the pregnancy, regardless of whether the baby is born alive.
- It is recognised that some current maternity systems create a pregnancy flag once an EDD date is entered. Systems need to ensure that this is amended if a pregnancy is aborted.
- Fetal losses must be linked to the 'fetal identifier'. It is recommended that a local flag is used to highlight fetal losses under the 'outcome of pregnancy' that make it clear that there is not a birth.
- There should be a local agreement on early pregnancy loss information sharing and integration between early pregnancy assessment/pregnancy related gynaecology and maternity services to allow for information transfer/sharing.
- The date and time of the second stage of labour, a required field in determining the duration of labour, could be derived and populated automatically, depending on local implementation.
- If an exact time is not known for recording the date and time of the rupture of membranes, an estimated time should be used in order for a system to accurately calculate the total duration.
- Where a pregnancy outcome is not a live birth, it is recommended that a local flag is displayed in the record so that it can easily be seen, and so prevent situations where a woman who has had a miscarriage presents to a service whose records show that she is still pregnant.

## Baby Details (Woman)

- This heading of the record is designed to capture information about the fetus/baby which is recorded on the mother's record.
- This heading allows for details about the outcome of the birth to be recorded. Note all these items **MUST** also be recorded on the baby's record. This should be a fully separate digital child health record<sup>14</sup> stored under the baby's NHS number. However local systems may provide a link between the two records.
- Any investigations recorded against the fetus following a stillbirth, including post mortems, should be recorded under this heading. All investigations requested for a live birth will be recorded on the baby record.

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<sup>14</sup> Healthy Child Record - <https://theprsb.org/standards/healthychildrecord/>