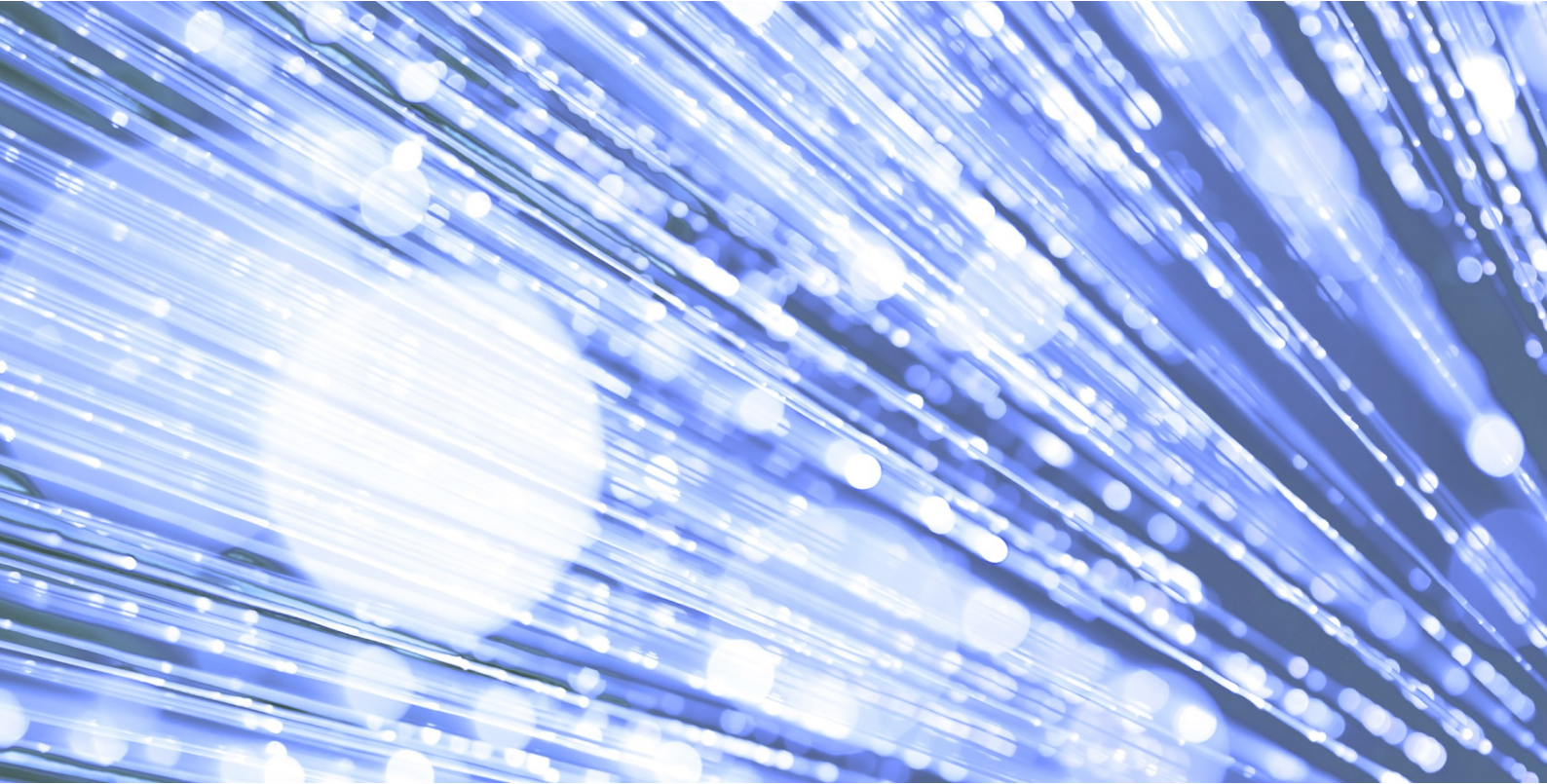


DCB1513 Amd 10/2018

Maternity Services Data Set Version 2.0 Change Specification

Published September 2018



Information and technology
for better health and care

Data Coordination Board

This information standard (DCB1513) has been approved for publication by the Department of Health and Social Care under [section 250 of the Health and Social Care Act 2012](#).

Assurance that this information standard meets the requirements of the Act and is appropriate for the use specified in the specification document has been provided by the Data Coordination Board (DCB), a sub-group of the Digital Delivery Board.

This information standard comprises the following documents:

- Change Specification
- Data Set Specification
- Implementation Guidance
- Requirements Specification.

An Information Standards Notice (DCB1513 Amd 10/2018) has been issued as a notification of use and implementation timescales. Please read this alongside the documents for the standard.

The controlled versions of these documents can be found on the [NHS Digital website](#). Any copies held outside of that area, in whatever format (e.g. paper, email attachment), are considered to have passed out of control and should be checked for currency and validity.

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Glossary of Terms

A full Glossary of Terms for the MSDS Information Standard can be found within the MSDS Requirements Specification.

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1. Overview

1.1. Summary

Standard	
Standard Number	DCB1513
Standard Title	Maternity Services Data Set (MSDS)
Description	<p>The MSDS is a patient-level data set that captures key information at each stage of the maternity care pathway including mother's demographics, booking appointments, admissions and re-admissions, screening tests, labour and delivery along with baby's demographics, admissions, diagnoses and screening tests.</p> <p>As a secondary uses data set it re-uses clinical and operational data for purposes other than direct patient care. It defines the data items, definitions and associated value sets extracted or derived from local information systems.</p> <p>MSDS v2.0 is an update to the existing data set that introduces a new structure and content, including clinical terminology, in order to meet current clinical practice and incorporate new requirements. MSDS v2.0 also mandates the submission of all maternity records in scope of the data set, including records that are held on paper which must be submitted in the required electronic format.</p> <p>MSDS v2.0 is designed to meet requirements that resulted from the National Maternity Review, which led to the publication of the Better Births report in February 2016. Better Births highlighted the need for maternity services in England to become safer, more personalised and provide better access to information for pregnant women. The publication of Better Births resulted in the establishment of the Maternity Transformation Programme, and the updated version of the data set forms part of the 'Sharing Data and Information' workstream of the programme.</p> <p><u>In Scope</u></p> <p>This standard mandates the central submission of administrative and clinical information for secondary uses purposes. The standard defines a 'data set specification' based on extracts from clinical records. The scope includes all activity undertaken by Maternity Services funded, and/or provided, by the NHS. This could include NHS Foundation and non-Foundation Trusts, as well as independent organisations providing NHS-funded Maternity Services.</p> <p>The scope of the data set includes all activity carried out by Maternity Services relating to the mother and baby or babies, from the point of the first booking appointment until mother and baby or babies are discharged from Maternity Services.</p> <p>In summary, this includes the following:</p> <ul style="list-style-type: none"> • Mother's Details • Mother's Booking, Pregnancy and Diagnosis Details • Care Contacts and Activities • Mother's Labour and Activity Details • Anonymous Assessments and Findings • Baby's Details

	<ul style="list-style-type: none"> • Hospital Provider Spells (inpatient stays in hospital during the pregnancy) • Header and Reference Data <p>Further guidance on definitions and technical aspects for monthly data submissions to a central data warehouse are provided to support the implementation of the standard and can be found here:</p> <p>www.digital.nhs.uk/isce/publication/dcb1513</p> <p>https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-sets/maternity-services-data-set</p> <p><u>Out of Scope</u></p> <p>The following areas are exceptions to the MSDS scope:</p> <ul style="list-style-type: none"> • Local system functionality or design: whilst the standard provides details of ‘what’ and ‘how’ data should be submitted, it does not stipulate any standard for the functionality or design of local clinical and operational systems, although if data is easy to collect and synchronise with care pathways it will improve the quality of the data provided. Separate work is ongoing on a primary data standard for maternity records. • Activities undertaken after mother and baby are discharged from Maternity Services, e.g. activity carried out by health visiting services. • Non-NHS funded services provided by independent organisations, e.g. private clinics and independent midwives, who are not required to make submissions unless commissioned by the NHS. • Activity carried out by other care services, e.g. by GPs. • Services rendered outside England.
<p>Applies to</p>	<p><u>Organisation Types</u></p> <p>The MSDS will be used in all organisations providing Maternity Services, and the standard applies to all NHS-funded Maternity Services in England, including Acute Trusts and Foundation Trusts actively involved in the maternity care pathway (antenatal, intrapartum and postnatal/postpartum episodes). This also includes private services commissioned by the NHS and provided by independent organisations.</p> <p><u>Services</u></p> <p>The standard primarily, but not exclusively, must be read and used by all NHS-funded Maternity Service providers, and related services that have an active involvement in the maternity care pathway, including:</p> <ul style="list-style-type: none"> • Obstetric Services. • Midwifery Services. • Fetal Medicine Services. • Radiology Services. • Pathology Services. • Gynaecology Services. • Neonatal Services. • Community Providers. <p><u>Professionals</u></p> <p>The standard primarily, but not exclusively, applies to the following</p>

	<p>professionals:</p> <ul style="list-style-type: none"> • Maternity Services administrative personnel. • Obstetricians. • Midwives. • Neonatologists. • Paediatricians. • Information and IT Professionals. <p><u>IT Systems</u></p> <p>The standard predominantly, but not exclusively, relates to the following electronic information systems:</p> <ul style="list-style-type: none"> • Patient Administration Systems (PAS). • Electronic Patient Records (EPR). • Commercial and National Maternity Systems. • Radiology Systems. • Pathology Systems. • Neonatal Systems. <p><u>Data Subjects</u></p> <p>The standard primarily, but not exclusively, aims to capture information on two data subjects:</p> <ul style="list-style-type: none"> • Pregnant women. • Babies. <p>Data will be captured for women and babies presenting for any part of the maternity care pathway. It is not necessary for the woman or baby to have a 'full data record', i.e. all antenatal, intrapartum and postnatal care delivered at the same organisation.</p> <p>In addition, limited information about women's partners (or the father of the baby) is captured.</p>
Release	
Release Number	Amd 10/2018
Release Title	Version 2.0
Description	<p>An ongoing requirement exists to update the Maternity Services Data Set (MSDS) in order to ensure the data set remains 'fit for purpose'.</p> <p>This release of the MSDS (v2.0) represents a significant change to the existing structure of the MSDS (v1.5) and brings the MSDS into line with the core structures of other data sets maintained by NHS Digital, specifically the Community Services Data Set (CSDS) and the Mental Health Services Data Set (MHSDS).</p> <p>The changes included in this release relate to new government policy initiatives, resolution of issues within the current data set, and inclusion of other key stakeholder requirements as set out in more detail in this document.</p>
Implementation Date	<p><u>System Conformance</u></p> <p>From 1 April 2019 maternity systems MUST be fully conformant with this standard.</p>

	<p>Health and Care Organisations</p> <p>From 1 April 2019 providers of NHS-funded maternity services, as defined in this Information Standard, MUST be able to collect the information as defined in the Technical Output Specification for local use.</p> <p>From 1 May 2019, providers of NHS-funded maternity services MUST begin submitting MSDS submissions in accordance with this standard.</p> <p>Providers of NHS-funded maternity services may also volunteer to participate in pilot trials ahead of the Implementation Completion Date to test the process ahead of full data collection, upon discussion and agreement with NHS Digital. Pilot data MAY be provided ahead of the full conformance date.</p>
Full Conformance Date	30 June 2019 - This is the date the April MSDS v2.0 submission window closes. Providers must have made a valid submission prior to this date, which will include data collected from 1 April 2019 until 30 April 2019.

1.2. Supporting products

This document should be read in conjunction with the following:

Ref #	Title
1	MSDS Requirements Specification
2	MSDS Data Model
3	MSDS Technical Output Specification
4	MSDS System Conformance Checklist
5	MSDS Implementation Guidance
6	MSDS User Guidance
7	MSDS Technical Guidance
8	NHS Data Model and Dictionary MSDS Change Request
9	MSDS XML Schema (hosted on TRUD – login required)

Please see the section 2.4 of the *Implementation Guidance* for a full list and descriptions of each related document.

1.3. Related standards

Reference	Title
SCCI1069	Community Services Data Set (CSDS)
DCB0011	Mental Health Services Data Set (MHSDS)
ISB0149-02	NHS Number for Secondary Care
ISB0149	NHS Number
SCCI0034	SNOMED CT
SCCI0021	International Classification of Diseases
ISB0092	Commissioning Data Sets (CDS)
DCB0090	Health and Social Care Organisation Reference Data

ISB1553	Read Clinical Terms Version 2 (Deprecated)
ISB1552	Read Clinical Terms Version 3 (Deprecated)
SCCI0075	Neonatal Critical Care Minimum Dataset
ISB 1555	Birth Notifications
DCB3017	Overseas Visitor Charging Category
SCCI2112	FGM Risk Indication System (FGM RIS) - Local System Integration

2. Change specification

2.1. Reason for release

The MSDS applies to, and is used by, a wide range of stakeholders. The content of the data set is determined from consultation with these stakeholders which include various sections of Department of Health and Social Care policy, NHS England (NHSE), Care Quality Commission, service providers and commissioners.

This release of the MSDS (v2.0) represents a significant change to the existing structure of the MSDS (v1.5) and brings the MSDS into line with the core structures of the Community Services Data Set (CSDS) and the Mental Health Services Data Set (MHSDS).

The changes included in this release relate to:

- new government policy initiatives
- the resolution of issues within the current data set
- requirements to capture and analyse additional data for a variety of purposes received since the data set was introduced
- inclusion of other key stakeholder requirements to meet current clinical practice and to ensure the data set remains fit for purpose

The high-level requirements are as follows:

- Structural changes to the data set
- Removal of paper-based records exemption
- Introduction of clinical classifications and terminology, including SNOMED CT
- Capture more detailed diagnoses (using clinical terminology)
- Updated payment requirements (using clinical terminology)
- Capture more detailed procedures, observations and findings (using clinical terminology)
- Changes to the capture of smoking status
- Capture scored assessments during maternity care pathway (using clinical terminology)
- Capture data about continuity of carer
- Enable linkage to neonatal data
- Capture data about personalised care plans
- Capture intended and actual place of birth
- Capture data from existing data sets and collections, i.e. the CDS 'maternity tail' data set and other collections, to enable future retirement of overlapping collections
- Conformance with additional NICE guidelines and quality standards
- Additional data items, such as 'overseas visitor status'
- Minor updates to the data set to remove redundant tables/items.

A number of requirements have resulted from the National Maternity Review, which led to the publication of the [Better Births report](#) in February 2016. Better Births highlighted the need for Maternity Services in England to become safer, more personalised and provide better access to information for pregnant women. The publication of Better Births resulted in the establishment of the [Maternity Transformation Programme](#), and the updated version of the data set forms part of the 'Sharing Data and Information' workstream of the programme.

Development of the MSDS v2.0 standard is part of an ongoing strategy to uplift the MSDS on a regular and potentially annual basis. This ensures that all stakeholders involved in the provision and flow of data is aware of the timescales involved for each change including when new collection and flow of data is required and can plan accordingly.

MSDS v2.0 (ref: DCB1513 Amd 10/2018) replaces MSDS v1.5 (ref: ISB 1513 Amd 45/2012), which was published in May 2014:

<http://digital.nhs.uk/isce/publication/isb1513>

The following documents/policies all provide further context to the changes required for MSDS v2.0:

Maternity Transformation Programme/Better Births report:

<https://www.england.nhs.uk/mat-transformation/>

Personalised Health and Care 2020

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

NHS Five Year Forward View

<https://www.england.nhs.uk/publication/nhs-five-year-forward-view/>

The remainder of this document details the reasons for the changes (2.2 Justification for changes) and goes on to summarise changes individually (2.3 Change specification).

2.2. Justification for changes

2.2.1. Structural changes to the data set

The structure of the current version of the MSDS has some limitations. These mainly relate to the use of the booking appointment date and estimated date of delivery to link activity relating to the same pregnancy. As a result, MSDS v2.0 will introduce structural changes, which include the following:

- Introduce Pregnancy Identifier as a linking item, to link multiple births to mothers and identify different pregnancies for the same mother
- Introduce Labour and Delivery Identifier as a linking item, so that bookings can be linked directly to labours, and the labour to one or more babies
- Restructure of the data set, so that the pregnancy/booking is the main table that other tables are linked to (instead of the mother's demographics table)
- Introduction of 'Local Fetal Identifier' as a required (but not mandatory) data item
- Allow 'Presentation' of fetus to be associated with the baby, so that different presentations can be recorded for multiple births
- 'Time' added as well as 'Date' as a separate data item in relevant tables (e.g. time of antenatal admission/appointment/discharge).

Aims: To restructure the MSDS so that it better reflects how clinical systems are structured and ensure that all aspects of a pregnancy and birth can be correctly linked and analysed.

Benefits: Expected reduced burden for care providers and system suppliers (to be confirmed by burden assessment), as the data set better matches the structure of their systems and is therefore easier to output. Improved data completeness, as providers will be able to include more data without manual workarounds. Improved data quality through the introduction of new linkage items such as the pregnancy identifier, allowing for improved reconciliation of babies from multiple births and better identification of different pregnancies for the same mother.

Impact of not progressing: Current structural limitations would remain, adversely affecting analysis particularly in the event of multiple births. Current burden would remain the same for providers and suppliers. Integration of other beneficial developments (e.g. clinical terminology) would be extremely difficult and burdensome to achieve.

2.2.2. Removal of paper-based records exemption

The current MSDS Information Standard Notice (ISN) includes a clause confirming that data “predominantly recorded on paper and not transcribed to any electronic form” does not need to be submitted. MSDS v2.0 has removed this wording, to make it clear that all maternity data requires submitting. The original paper exemption clause was included as at the time many Maternity Services did not have available Electronic Patient Records (EPR). Since then, providers have adopted EPR systems as evidenced by data set submission rates and so the exemption is no longer required. This is consistent with the Personalised Health and Care 2020 policy (previously Paperless 2020) and the wider adoption of electronic systems by Maternity Services since the publication of the current MSDS ISN. A separate part of the Maternity Transformation Programme (‘harnessing digital technology’ workstream) is concerned with ensuring electronic systems are standardised, assured and adopted, and is producing a Primary Record Standard in conjunction with the Professional Records Standards Body (PRSB) which has informed the content of the data set and will continue to do so in the future.

Aims: Remove the current clause allowing providers not to submit paper-based data, to ensure that all providers submit all applicable data and encourage the use of electronic systems.

Benefits: Support and reinforce the increased adoption and use of electronic systems by Maternity providers, leading to potential benefits in clinical care; due to the data set’s alignment with the forthcoming PRSB primary record standard. Improved data coverage and completeness, as all NHS-funded maternity data will be in scope. Better alignment with the Personalised Health and Care 2020 policy, which sets out proposals to end the use of paper records.

Impact of not progressing: Incomplete data submitted to the data set, reducing its usefulness to stakeholders. Providers not encouraged to adopt electronic systems, with a resulting impact on the standards of clinical care and interoperability. Providers may seek to

use the clause as a reason not to adopt electronic systems and/or not submit all relevant data. Potential negative impact on other national programmes that rely on EPR systems being put in place, including the [Harnessing Digital Technology](#) workstream.

2.2.3. Introduction of clinical terminology, including SNOMED CT

SNOMED CT (Systematised Nomenclature of Medicine - Clinical Terms) is a structured clinical vocabulary for use in an electronic health record. SNOMED CT is an internationally agreed standard for capturing diagnoses, procedures, observations and findings across all care settings. In addition to SNOMED CT, MSDS v2.0 allows the submission of other types of clinical terminology and classifications where captured locally and where applicable, specifically ICD-10, OPCS-4, Read Code Version 2 and Read Code Clinical Terms Version 3 (CTV3) (though the latter two have been deprecated). The ability to flow data in the form of clinical terminology, including SNOMED CT, has already been successfully introduced into the CSDS and MHSDS.

Aims: Bring MSDS v2.0 into line with other national, patient-level data sets in terms of structure and content by allowing care providers to submit data in the form of clinical terminology, including SNOMED CT.

Benefits: The introduction of clinical terminology brings many benefits, including:

- Enabling consistent analysis across multiple care domains and providers
- Reducing burden, as care providers are only required to capture information for primary use and the data can then be used for secondary purposes without local transformation
- Quicker reaction to changes in national reporting requirements. As SNOMED CT is updated every 6 months, new terms can be included and analysed quickly in national reports.
- Simplifying and standardising how data can be collected from local systems
- Aligning with data interchange standards that are being developed for primary use (e.g. by the 'harnessing digital technology' workstream)
- More detailed analysis (see 2.2.4 below)
- Conforms to the [Personalised Health and Care 2020](#) policy, which requires local systems to move to using SNOMED CT as the single standard for holding data locally for primary use in all care settings by April 2020. This is also set out in the [SCCI0034: SNOMED CT Information Standard](#).

Impact of not progressing: The benefits above would not be realised. In particular, burden would remain high for providers due to the need for manual data mapping, and various areas of new analysis (as outlined below) could not be completed. In addition, new requirements would increase the burden on providers further as new data items and value lists will require mapping to national codes.

2.2.4. Capture more detailed diagnosis (using clinical terminology)

The introduction of SNOMED CT and other forms of clinical terminology, as outlined above, will enable more detailed diagnoses to be captured for a variety of purposes in comparison to the restricted value lists used in the current version of the MSDS.

Aims: Capture diagnosis at both a detailed level and a higher level using clinical terminology, including SNOMED CT, for a variety of purposes.

Benefits: Diagnoses can be submitted and analysed at different levels using the disease hierarchies built into SNOMED CT, reducing the amount of data required to be mapped and sent by providers and allowing more detailed data to be captured covering specific areas, such as:

- Female Genital Mutilation (FGM) and deinfibulation
- Specific diagnoses for the baby (e.g. cystic fibrosis where diagnosed in the baby by the maternity service)
- Specific requests for more detailed diagnoses for the mother, for example an NHS England requirement to capture specific diagnoses for cost benefit analysis relating to the Saving Babies Lives Care Bundle and continuity of carer modelling – e.g. diabetes, cerebral palsy
- Suspected fetal complications in pregnancy (e.g. suspected or confirmed fetal growth restriction and reduced fetal movements)
- Baby outcome information, to include a distinction between antepartum and intrapartum stillbirths

Impact of not progressing: Value lists would have to be developed and maintained to allow the above information to be captured. These would be burdensome to maintain and result in care providers having to manually map their data to the available values. Alternatively, the more detailed diagnoses would not be captured at all, reducing the usefulness of the data set in identifying specific conditions and looking at trends for these.

2.2.5. Updated payment requirements (using clinical terminology)

Updated items for the antenatal and postnatal pathways will be incorporated into the data set. These will largely be captured as diagnosis codes using SNOMED CT (see section 2.2.4).

Aims: To introduce updated payment requirements in the form of clinical terminology, i.e. enable the capture of specific diagnosis codes to enable a payment pathway (standard, intermediate or intensive) to be set for mothers with specific conditions or complex social factors.

Benefits: Providers can be accurately reimbursed by their commissioners for the specific care that they provide. All payments can be calculated using the data set meaning that providers do not have to send separate data to their commissioners, once their MSDS submissions are sufficiently complete.

Impact of not progressing: Payments cannot be calculated accurately, leading to some providers not being adequately funded. Possible increased burden, assuming payments are calculated using an alternative method. May even lead to additional overlapping data flows being established to meet the requirements of new payment models, increasing the overall burden on the health sector.

2.2.6. Capture more detailed procedures, observations and findings (using clinical terminology)

SNOMED CT enables the capture of specific measurements or findings, such as maternal blood loss/postpartum haemorrhage at greater granularity: (estimated) blood loss in millilitres at the time of birth.

Aims: Record specific clinical procedures, observations and findings within the MSDS at a more granular level using clinical terminology, in order to meet explicit policy requirements around measuring the care given to mothers, as set out in 'Better Births'.

Benefits: Measurements such as blood loss are already recorded by services at a granular level, but the current version of the MSDS uses a drop-down list of 'ranges'. The current categorisation is therefore more work for the service and limits information. From a clinical point of view, it would be valuable to be able to identify the full range of blood loss as estimated. For example, having one group for all blood loss of 1500ml and over is not so meaningful; a loss of around 1500ml is clinically very different from a loss of several litres.

Impact of not progressing: Data would continue to be captured using value lists at a less detailed level, reducing the usefulness of data for analysis and increasing the need for data to be manually manipulated by submitters.

2.2.7. Changes to the capture of smoking status

Smoking status will be captured at all stages of pregnancy in MSDS v2.0 (e.g. at booking, delivery, discharge) using SNOMED CT (observation/finding) codes. Smoking status can also be recorded using carbon monoxide testing of the mother, using SNOMED CT (observation/finding) codes.

Aims: Ensure that smoking status can be captured at all stages of pregnancy in MSDS v2.0 (e.g. at booking, delivery, discharge), and can be captured where different clinical methods are used (e.g. carbon monoxide testing of the mother).

Benefits: Capturing smoking data at different stages of the pregnancy will help to inform if the mother stopped smoking for the duration of the pregnancy, and/or resumed smoking before discharge. This information could also be linked to referrals to smoking cessation services in analysis. Carbon monoxide measurement is much more objective than asking a

question and is increasingly used by Maternity Services. Using SNOMED CT to capture this data will reduce burden where data is captured in this way locally.

Impact of not progressing: Failure to meet analysis requirements around smoking duration, frequency and analysis. The data captured in the MSDS will not reflect current local practice (data about carbon monoxide testing will not be submitted).

2.2.8. Capture scored assessments during maternity care pathway (using clinical terminology)

New tables will be added to MSDS v2.0 to allow data about scored assessments delivered as part of a contact or completed by a mother outside of a specific contact to be recorded. This could include the Whooley questions, Patient Health Questionnaire (PHQ-9), Generalised Anxiety Disorder Assessment (GAD-7) and the Edinburgh Postnatal Depression Scale (EPDS) concerned with maternal mental health. Anonymous patient reported experience measures can also be captured and flowed in a separate table.

The generic assessment structure allows further scored assessments, once identified, to flow as clinical terminology with minimal delay. The future addition of new assessments (after MSDS v2.0 has gone live) will be subject to licensing restrictions/SNOMED CT code authoring.

Aims: Allow the capture of data about specific scored assessments carried out during pregnancy, and other assessments as and when they are mandated/recommended for use, e.g. London Measure of Unplanned Pregnancy, when this is rolled out nationally.

Benefits: Information about important, self-stated areas of maternal health, including mental health, can be captured and monitored within the data set. Usage of the Whooley questions, which can be an important trigger in asking pregnant women whether they require help with any difficulties identified, can be monitored.

Impact of not progressing: Gaps in the analysis of maternal mental health measures. If a SNOMED CT structure is not used, a new table would have to be added for every separate assessment.

2.2.9. Capture data about continuity of carer

MSDS v2.0 will introduce the ability to capture staff details in a new table and link this information to the various stages of the maternity pathway using a Care Professional Local Identifier – including capture of the clinician's role, professional registration body code/entry identifier and senior person at delivery. This will allow information to be recorded about continuity of carer, in terms of which care professional(s) or team(s) have seen a mother at each stage of the maternity pathway.

Aims: Ensure that the continuity of carer provided to a mother during the maternity pathway can be monitored.

Benefits: The provision of care by a known midwife throughout the pregnancy, labour, birth and postnatal period can be associated with improved health outcomes for the mother and baby, and greater satisfaction levels. Continuity of carer is a recommendation of the 'Better Births' report. Including a 'staff details' table within the data set will allow continuity of carer to be monitored for individual mothers and linked to their outcomes.

Impact of not progressing: No details on the staff member or team looking after a mother during the maternity pathway will be captured, meaning continuity of carer (and the effects of this) cannot be evaluated.

2.2.10. Enable linkage to neonatal data

Neonatal data was not captured in version 1.5 of the MSDS. To avoid increasing the burden on care providers, who already submit neonatal data within other data sets, neonatal data is not captured directly in MSDS v2.0. However, MSDS data will be linked to the existing National Neonatal Data Set (NNDS) or the Commissioning Data Set - Neonatal Critical Care Minimum Data Set (NICU), which include the neonatal level of care. MSDS data may also be linked to other data sets for different purposes, and this will be outlined in published fair processing material.

Aims: Enable linkage to existing neonatal data to ensure that outcomes are known and recorded for babies referred to neonatal care or neonatal critical care.

Benefits: At present, the MSDS captures referrals to neonatal units without much detail of the treatment or outcome for the baby. Linkage to existing data set(s) will allow outcomes information to be linked to activity that happened as part of antenatal care, but without adding burden for providers who already submit neonatal data to the existing data set(s). This linkage would also allow the neonatal level of care to be known, which the national clinical lead for maternal health has prioritised.

Impact of not progressing: Neonatal treatment and outcomes will continue to be unknown for babies that are referred to neonatal care. Assuming linkage does not take place, neonatal data may have to be captured within the MSDS, increasing duplication and burden for care providers.

2.2.11. Capture data about personalised care plans

A new table will be added to the data set structure to capture the details of personalised maternity care plans, which is a key recommendation of the Better Births report.

Aims: Ensure that details of a mother's personalised care plan can be captured within the MSDS.

Benefits: Allow reporting about the adoption of a key requirement of Better Births ("Every woman should develop a personalised care plan, with her midwife and other health professionals, which sets out her decisions about her care, reflects her wider health needs

and is kept up to date as her pregnancy progresses¹). Link details of personalised care plans with outcomes and patient satisfaction.

Impact of not progressing: Data about personalised care plans will not be available nationally, restricting analysis about the adoption and benefits of these.

2.2.12. Capture intended and actual place

Intended and actual place of birth are key elements of the 'Birthplace Study', and allow outcomes for women and babies transferred to hospital from home or midwifery units during labour to be examined. Capturing this data in MSDS v2.0 will allow a continuous evaluation of birth outcomes according to planned place of delivery, and the monitoring of changes to this during the maternity pathway.

Aims: Enable details of a mother's intended and actual place of birth, and any changes to this throughout the maternity pathway, to be recorded and analysed.

Benefits: Capturing this data in MSDS v2.0 will allow a continuous evaluation of birth outcomes according to planned place of delivery, and the monitoring of changes to this during the maternity pathway. Burden will also be reduced, as future iterations of the separate 'Birthplace Study' may not need to be carried out.

Impact of not progressing: No way to nationally record and compare changes to intended/actual place of birth, and any clinical impact from this. Possible increased burden due to need for providers to contribute to a separate study.

2.2.13. Capture data from existing data sets and collections, i.e. the CDS 'maternity tail' data set and aggregate collections, to enable the future retirement of overlapping collections

Several other data sets and collections capture data relating to different aspects of maternity care. By ensuring that MSDS v2.0 can capture the same data as existing collections, which include the CDS 'maternity tail' and aggregate collections (for example, those submitted through the former Unify 2 platform), these additional collections will be retired once data quality and completeness within the MSDS is sufficient.

Aims: Ensure that other data collections containing maternity data can be replicated in the MSDS, to enable the possible future retirement of other collections covering the same scope and submitters.

¹ Better Births report, page 8: <https://www.england.nhs.uk/wp-content/uploads/2016/02/national-maternity-review-report.pdf>

Benefits: In the future this could result in reduced burden for providers, in that they will only need to submit data to the MSDS. Also reduced burden for NHS Digital in not having to maintain and analyse data from a few different collections.

Impact of not progressing: Burden would remain the same as currently for a longer period. Duplication of effort within NHS Digital would continue.

2.2.14. Conformance with additional NICE guidelines and quality standards

MSDS v2.0 will allow the capture of data relating to relevant National Institute for Health and Care Excellence (NICE) guidelines and quality standards, including:

- [NICE QS Ectopic pregnancy and miscarriage \(QS69\)](#)
- [NICE QS Jaundice in newborn babies under 28 days \(CG98\)](#)
- [NICE QS Hypertension in pregnancy \(QS35\)](#)

Aims: Ensure that the use of and adherence to recent clinical guidance published by NICE can be monitored in the data set.

Benefits: Data relating to recommended clinical practice for key risk areas in maternity care (e.g. neonatal jaundice) can be captured and analysed. SNOMED CT codes published by NICE can be used in this area to minimise burden for submitters.

- **Impact of not progressing:** The data set will not reflect current clinical best practice. Burden may be increased if this information has to be captured using another method (e.g. value lists which need to be maintained by the developer and manually mapped to by submitters). [NICE \(D\) QS Ectopic pregnancy and miscarriage \(QS69\)](#).

2.2.15. Additional data items

A new data item will be added to the data set to record the clinical systems that providers use locally ('Primary Data Collection System In Use'), which will help to identify common submission or data quality issues.

In addition, the overseas visitor charging category of the mother will be captured.

A number of other new data items have also been added to the data set, but these are generally to facilitate the other changes listed above (for example, addition of 'Diagnosis (Coded Clinical Entry)' fields to allow diagnosis codes to flow in the form of clinical terminology, or the 'Pregnancy Identifier' used to link data together within the new structure).

Aims: Ensure that the data set can capture all relevant data items relating to recent policy changes (for example, capturing overseas visitor status) or to improve data quality (for example, recording the primary clinical system in use).

Benefits: Capturing the overseas visitor status will allow adherence to the National Health Service (Charges to Overseas Visitors) Regulations 2015, which place a legal obligation on NHS trusts to establish whether a person is an overseas visitor to whom charges apply, to be monitored. This could lead to reduced costs for the NHS in having to treat patients who are not entitled to free NHS care. Capturing the primary clinical system used locally by care providers will assist in monitoring data quality issues across providers with the same clinical system, and communication with suppliers where required.

Impact of not progressing: The data set will remain outdated in certain areas. The success of charging overseas mothers for care will not be known, which may have funding implications. Data quality may suffer as a result of not knowing which system providers use locally.

2.3. Change specification

The development of the MSDS v2.0 involves significant restructuring so that it better reflects how clinical systems are designed and ensure that all aspects of a pregnancy and birth can be correctly linked and analysed.

The revised structure of MSDS v2.0 in comparison to MSDS v1.5 has resulted in significant changes. While some tables that were present in MSDS v1.5 have an equivalent table in MSDS v2.0, every table in MSDS v1.5 has been changed in some respect in the update to MSDS v2.0.

Some tables from MSDS v1.5 have been removed as the information they collect can instead be collected using clinical terminology in MSDS v2.0. The introduction of clinical terminology has similarly resulted in the introduction of various new tables in MSDS v2.0. One table has been removed completely as the information previously collected is no longer required. The high-level changes to each table are summarised below.

2.3.1. Amendments to existing data tables

Several tables in MSDS v2.0 remain similar to tables in MSDS v1.5, although new data items have been added/ removed, code lists have been updated and the linking structure of the tables has been changed.

Table in MSDS v1.5	Equivalent table in MSDS v2.0
MATHDR Maternity Header	MSD000 MSDS Header
MAT001 Mother's Demographics	MSD001 Mother's Demographics
MAT003 GP Practice Registration	MSD002 GP Practice Registration
MAT101 Booking Appointment Details	MSD101 Pregnancy and Booking Details
MAT112 Dating Scan Procedure	MSD103 Dating Scan Procedure
MAT301 Maternity Care Plan	MSD102 Maternity Care Plan
MAT310 Antenatal Admission	MSD501 Hospital Provider Spell
MAT404 Labour and Delivery	MSD301 Labour and Delivery
MAT502 Baby's Demographics and Birth Details	MSD401 Baby's Demographics and Birth Details
MAT508 Neonatal Critical Care Admission	MSD402 Neonatal Admission

2.3.2. New tables

Several new tables have been added to facilitate the collection of new information. Many of these new tables will facilitate the collection of information via clinical terminology:

- MSD003 Social and Personal Circumstances
- MSD104 Coded Scored Assessment (Pregnancy)
- MSD105 Provisional Diagnosis (Pregnancy)
- MSD106 Diagnosis (Pregnancy)
- MSD107 Medical History (Previous Diagnosis)
- MSD108 Family History at Booking
- MSD109 Finding and Observation (Mother)
- MSD201 Care Contact (Pregnancy)
- MSD202 Care Activity (Pregnancy)

- MSD203 Coded Scored Assessment (Contact)
- MSD302 Care Activity (Labour and Delivery)
- MSD403 Provisional Diagnosis (Neonatal)
- MSD404 Diagnosis (Neonatal)
- MSD405 Care Activity (Baby)
- MSD406 Coded Scored Assessment (Baby)
- MSD502 Hospital Spell Commissioner
- MSD503 Ward Stay
- MSD504 Assigned Care Professional
- MSD601 Anonymous Self-Assessment
- MSD602 Anonymous Findings
- MSD901 Staff Details

2.3.3. Deletions

The following table has been removed as the test that would capture this information is no longer carried out routinely:

MAT203 Mother's Rubella Susceptibility Test

A number of other tables from MSDS v1.5 have been removed because the information that they capture is instead intended to be captured in one of the new tables in MSDS v2.0. In most cases the equivalent information is captured using clinical terminology. These changes are identified below.

Table in MSDS v1.5	Table where equivalent information is capturable in MSDS v2.0
MAT102 Complicating Medical Diagnosis at Booking	MSD106 Diagnosis (Pregnancy)
MAT103 Previous Complicating Obstetric Diagnosis at Booking	MSD107 Medical History (Previous Diagnosis)
MAT104 Family History Diagnosis at Booking	MSD108 Family History at Booking
MAT201 Mother's ABO Blood Group and Rhesus Test	MSD202 Care Activity (Pregnancy) & MSD109 Finding and Observation (Mother)
MAT205 Mother's Hepatitis B Screening Test	MSD202 Care Activity (Pregnancy) & MSD109 Finding and Observation (Mother)
MAT210 Mother's Asymptomatic Bacteriuria Screening Offer	MSD202 Care Activity (Pregnancy) & MSD109 Finding and Observation (Mother)
MAT211 Mother's Haemoglobinopathy Screening Test	MSD202 Care Activity (Pregnancy) & MSD109 Finding and Observation (Mother)
MAT303 Downs Syndrome Screening Test	MSD202 Care Activity (Pregnancy) & MSD109 Finding and Observation (Mother)
MAT305 Fetal Anomaly Screening Test	MSD202 Care Activity (Pregnancy) & MSD109 Finding and Observation (Mother)
MAT306 Antenatal Appointment	MSD202 Care Activity (Pregnancy) & MSD109 Finding and Observation (Mother)
MAT307 Medical Diagnosis	MSD106 Diagnosis (Pregnancy)
MAT309 Maternity Obstetric Diagnosis	MSD106 Diagnosis (Pregnancy)
MAT401 Medical Induction Method	MSD302 Care Activity (Labour and Delivery)

MAT405 Pain Relief in Labour and Delivery	MSD302 Care Activity (Labour and Delivery)
MAT406 Anaesthesia Type in Labour and Delivery	MSD302 Care Activity (Labour and Delivery)
MAT408 Maternal Critical Incident	MSD302 Care Activity (Labour and Delivery)
MAT409 Genital Tract Trauma	MSD302 Care Activity (Labour and Delivery)
MAT501 Fetus Outcome	MSD401 Baby's Demographics and Birth Details & MSD405 Care Activity (Baby), or MSD109 Finding and Observation (Mother)
MAT504 Baby Complications at Birth	MSD405 Care Activity (Baby)
MAT506 Neonatal Resuscitation Method	MSD405 Care Activity (Baby)
MAT507 Neonatal Resuscitation Drug or Fluid	MSD405 Care Activity (Baby)
MAT510 Neonatal Diagnosis	MSD404 Diagnosis (Neonatal)
MAT511 Neonatal Critical Incident	MSD405 Care Activity (Baby)
MAT513 Newborn Physical Screening Examination	MSD405 Care Activity (Baby)
MAT515 Newborn Hearing Screening Test	MSD405 Care Activity (Baby)
MAT517 Newborn Blood Spot Screening Test	MSD405 Care Activity (Baby)
MAT602 Mother's Postpartum Discharge from Maternity Services	MSD101 Pregnancy and Booking Details & MSD202 Care Activity (Pregnancy)
MAT603 Mother's Postpartum Readmission	MSD501 Hospital Provider Spell
MAT901 Complicating STIs at Booking	MSD602 Anonymous Findings
MAT903 Mother's Syphilis Screening Test	MSD602 Anonymous Findings
MAT905 Mother's HIV Screening Test	MSD602 Anonymous Findings
MAT906 Maternity STI Diagnosis	MSD602 Anonymous Findings

2.4. Change Control

This *Change Specification* represents a summary of changes included in MSDS v2.0 which should be read in conjunction with the *Technical Output Specification* to fully understand the changes to the data set.

N.B. The latest version of the Technical Output Specification is published with other supporting documents on the NHS Digital [MSDS webpages](#).