

DCB3009 (Amd 11/2020) Healthy Child Record Standard Collaborative Requirements Catalogue

Current version: 2.0
Version date: 08/10/2020



Information and technology
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Data Coordination Board

This information standard DCB3009 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:

Key documents:

- Record Specification
- Collaborative Requirements Catalogue
- Interoperability Specification and Implementation Guidance.

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.

Date of publication: 8 October 2020.

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Glossary of Terms

Term / Abbreviation	Description
API	Application Programming Interface
Child/Children	<p>The term Child or Children is used interchangeably throughout the document to ease reading.</p> <p>The terms relate to all Children or Young People from birth up to the day before their 19th birthday, with the exception of young adults who remain in paediatric services after their 19th birthday and are included until their transition to adult services is completed.</p>
DCB	Data Coordination Board
Explicit Subscription	An NHS number-specific subscription that can be created, searched, viewed or deleted.
DCH	Digital Child Health Programme
FHIR	Fast Healthcare Interoperability Resources
FSN	Fully Specified Name (in relation to usage of SNOMED-CT)
Generic Subscription	Rules based subscriptions which are managed centrally by NHS Digital. Within a generic subscription, NHS numbers are automatically assigned to the subscription based on Local Authority Boundaries, Clinical Commissioning Group boundaries (based on mother/child's GP) and defined age ranges.
HVS	Health Visiting Service
MESH	Messaging Exchange for Social care and Health
NEMS	National Event Management Service
PDS	Personal Demographics Service
Provider	The provider of a particular healthcare service, for example Health Visiting Services or School Nursing Services
SNOMED-CT	Systemized Nomenclature of Medicine – Clinical Terminology
Supplier	The supplier of clinical systems used by Providers, for example, the supplier of a clinical system used by a Health Visiting Service or a School Nursing Service

1. Document Purpose

The purpose of this document is to enable Providers to convey DCH specific supplier system requirements in support of the Phase 2 DCB3009 (Amd 11/2020) standard.

The requirements in this document relate specifically to DCH messaging and events. Requirements relating to new and existing health and social care organisations wishing to publish and/or subscribe to the National Events Management Service (NEMS) from initial engagement, build and test through to implementation into live are contained within the National Events Management Service Onboarding Guide

2. Requirements

The requirements within this specification are assigned prioritisation levels using MoSCoW method, namely:

- **MUST** – This word, or the term “SHALL”, means that a requirement is mandatory, and business and project objectives cannot be met without it
- **SHOULD** – This word means that a requirement is mandatory, but the system will have short-term value without it and development can therefore wait until a later increment
- **COULD** – This word means that a requirement is beneficial if time or funds allow, but it is not central to project objectives
- **WOULD LIKE (or WANT TO HAVE)** – These words indicate that a requirement will not be met in this delivery increment, but may be included in the future

2.1 Messaging Requirements

Requirement ID	Description
DCH-387	If a data item is marked as MANDATORY or REQUIRED, it MUST not be downgraded to OPTIONAL by local agreement. However, it COULD by local agreement, be upgraded from OPTIONAL to either REQUIRED or MANDATORY.
DCH-322	A supplier system MUST retain any draft saving (or validation) capability and ensure that data does not flow externally before the user is ready for it to do so. This COULD be a partial save/save to local function. This MUST not be used in a way that would prevent data being exchanged.
DCH-501	<p>A supplier system MUST, where appropriate, include both an FSN (Fully Specified Name) or Preferred Term and the SNOMED CT code within a message.</p> <p>For example, in the Vaccination Event if the code 170433008 is included, it must be accompanied by either:</p> <ul style="list-style-type: none"> • MMR vaccination – 2nd dose, or; • Measles Mumps and Rubella vaccination – second dose, or; • Measles Mumps and Rubella vaccination – second dose (procedure) <pre> <extension url=https://fhir.hl7.org.uk/STU3/StructureDefinition/Extension-CareConnect-VaccinationProcedure-1> <valueCodeableConcept> <coding> <system value="http://snomed.info/sct"/> <code value="170433008"/> <display value="Measles mumps and rubella vaccination – second dose (procedure)"/> </pre>

DCH-482	<p>For all events, a supplier system MUST ensure all the data (that is contained within the event) that is needed to populate the record is done so automatically to avoid any re-keying of data.</p> <p>For example, in Birth Notification the supplier system MUST make data that is required for the registration of a patient/adding to caseload from the Birth Notification available to a user to avoid any re-keying of data that is within the event.</p>
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2.2 Publishing Requirements

Requirement ID	Description
DCH-386	<p>A supplier system MUST ensure that there is a guaranteed delivery of 100% of FHIR messages to the NEMS.</p> <p>Where an event message is sent, and an acknowledgement/response is not received by the recipient system the message must be resent.</p>
DCH-325	<p>A supplier system MUST publish all events to the NEMS with no delay once a user fully commits the data for the entire event to the application.</p> <p>This requirement does not apply to Bloodspot Test Outcome events. For timings relating to Bloodspot Test Outcomes, see DCH-506.</p>
DCH-506	<p>A supplier system MUST publish Bloodspot Test Outcome events to the NEMS with no delay once a user authorises/validates the entire event within the application, or once the child reaches 13 days of age.</p> <p>The 13 day intervention period MUST also be configurable in order to accommodate any future changes to the length of the intervention delay period.</p>
DCH-330	<p>A supplier system MUST display to an 'admin/appropriate user' that a FHIR message has been rejected from the NEMS along with the appropriate error message.</p>
DCH-690	<p>A supplier system MUST send a new Professional Contacts message, with a start date but no end date, to acknowledge professional responsibility when a child is added to a caseload/population cohort. Where the whole process of creating a record for a child/adding a child to a caseload or population cohort is not automated, positive action is required before the message can be sent.</p>
DCH-691	<p>A supplier system MUST send an update Professional Contacts message, including an end date, where professional responsibility is ended due to a child being removed from a caseload/population cohort. Where the whole process of removing a record for a child/removing a child from a caseload or population cohort is not automated, positive action is required before the message can be sent.</p>

2.3 Ingestion Requirements

Requirement ID	Description
DCH-360	<p>A supplier system MUST ingest all information contained in an event to the record of the child, however if there is information that is not deemed as necessary by supplier user groups this does not have to be displayed.</p> <p>For information that is ingested it MUST be displayed under the correct heading as per the Healthy Child Record Specification. Some information may be required to be displayed in more than one heading. For example, a feeding event may be required to be integrated into both the Feeding heading and New Born Review heading. All information is within the Healthy Child Record Specification.</p>
DCH-334	<p>A supplier system MUST be able to allow events that are received to be automatically ingested into the appropriate record without user intervention. This includes no workflow, no user review of the data. This requirement is about ensuring that the technical capability exists in each supplier system. This is referred to as 'auto-ingestion' and is linked to DCH-341.</p>
DCH-372	<p>A supplier system MUST integrate the event into the record of the correct child within 1 minute of polling of MESH or being manually checked as per DCH-341. Exceptions are:</p> <p>DCH-341 User wants to be notified of a certain type of event, DCH-343 Record is locked out (via concurrent usage of the record), DCH-512 Bloodspot Test Outcomes in Patient Facing Systems</p>
DCH-481	<p>A supplier system MUST poll MESH for new events at least every 30 minutes. This is applicable for 24 hours a day, 7 days a week.</p>
DCH-341	<p>A supplier system MUST for a certain subset of events (defined either locally or nationally) provide a notification to a user to ensure that the event is positively checked by a user before being allowed to fully ingest, or after being fully ingested, into a record.</p> <p>Events that MUST be notified to a user as per national guidelines are:</p> <ul style="list-style-type: none"> - Birth Notification - Change of Address - Change of GP - Death Notification - NIPE Outcomes - Newborn Hearing - Vaccination - Bloodspot - Failsafe Alert <p>This requirement MUST be configurable at service and/or provider level.</p> <p>Example 1 – configurable by PROVIDER. Bradford HVS may want to 'auto-ingest' a Observation event, but Leeds HVS may want all these to go into a 'workflow'.</p> <p>Example 2 – configurable by SERVICE. A HVS service may want to 'auto-ingest' a Observation event, but a GP service may want to ensure that this goes into a 'workflow'.</p>
DCH-343	<p>If an event is received whilst the record is 'locked out' the supplier system MUST inform the user/viewer that a newer version of the data may be available should</p>

	they wish to ingest as soon as possible. The term "locked out" refers to there being concurrent access to the record.
DCH-345	A supplier system MUST not allow data that is integrated into the record from another source system to be amended, appended or deleted. This does not include any data sent from PDS.
DCH-335	The supplier system MUST make the provenance visible to the user within the relevant part of the record without navigation. Provenance is defined as where the care event/intervention happened, who did it and when. As opposed to who created the event. This is not applicable for the following events <ul style="list-style-type: none"> - Birth Notification - Change of Address - Change of GP - Death Notification - Professional Contact
DCH-512	A supplier MUST not display Bloodspot Test Outcome events within Patient Facing Systems until the child is at least 42 days old. The 42 day waiting period MUST also be configurable in order to accommodate any future changes to the length of the delay period.
DCH-468	A supplier MUST do a check on a message to see if it is a complete duplicate and raise as appropriate with NHS Digital Service Management. A duplicate is defined as an event containing the same MessageHeader id as an event already received and processed.

2.4 Message Sequencing Requirements

Requirement ID	Description
DCH-339	A supplier system MUST be able to handle a deleted event message that is published to the NEMS. Event deletion must follow the same behaviour following receipt of a delete event message as it does when deleting an event within the source system.
DCH-514	A supplier system MUST be able to handle a 'delete' event that is received from the NEMS before the original event has been received. Out of sequence 'delete' events must be held for 24 hours to ensure that the 'create' event can be ingested and then deleted upon being received. The amount of time the 'delete' event is held for MUST be configurable to accommodate any future changes and ensure that all events are deleted as appropriate.
DCH-709	A supplier system MUST be able to handle an updated screening event that is published to the NEMs after the original has already been published. Updated screening events are published as a "New" event type, with the same focus and identifiers as the original event. This MUST reflect any update that is needed to any existing workflows.

2.5 Error Handling Requirements

Requirement ID	Description
DCH-469	<p>A supplier system MUST not give the user an opportunity to ignore an event if that record for the child already exists. If, at the point of reviewing information, it is deemed to be incorrect, it MUST be ingested into the record and incorrect data items flagged as 'under investigation' as per DCH-346.</p> <p>In the event of perceived inaccurate or incorrect information the receiving provider must contact the originating provider.</p> <p>Any existing exception processes for the receipt of corrupted/bad data COULD be retained, including deletion of data items as per DCH-345.</p>
DCH-346	<p>A supplier system MUST offer a user functionality to flag data that has been ingested into the record that a user believes is incorrect and is 'under investigation' as per DCH-469.</p> <p>This is not applicable for demographic screens within a supplier system.</p>
DCH-340	<p>A supplier system MUST notify a user if an event is received where an NHS Number does not exist within the database and/or the child does not have a record.</p> <p>On the back of this <i>if</i> the user has a PDS compliant system they MUST be prompted to perform a PDS trace to get the details of the child from PDS.</p> <p>If the event is deemed as incorrectly arriving (not matching subscription) then a call should be raised as appropriate with NHS Digital Service Management and the event audited as per DCH-396.</p>
DCH-483	<p>A supplier system MUST create a workflow or interface where events that do not match to an existing NHS Number within the database can be reviewed and actioned, if necessary, by a user.</p>

2.6 Demographic Messaging Requirements

Requirement ID	Description
DCH-397	<p>A supplier system MUST accept Demographic Events, but SHOULD prompt the user to go into the record and perform a PDS trace as per current process for demographics.</p> <p>This is applicable to:</p> <ul style="list-style-type: none"> - Birth Notification - Change of Address - Change of GP - Death Notification <p>https://developer.nhs.uk/apis/demographicupdates-120-rc/index.html</p>

2.7 Healthy Child Record Specification Requirements

Requirement ID	Description
DCH-445	A supplier system MUST adopt the Healthy Child Record Specification ¹ as per the Phase 2 DCB3009 (Amd 11/2020) standard.
DCH-452	A supplier system MUST allow each section (heading) to be filterable and have the ability to search for specific sections (headings), to include being able to filter at a section (heading) level, and searchability at an element level. For example, a user MUST be able to filter on 'birth details' section (heading) or search specifically for the element 'weight'.
DCH-453	A supplier system MUST allow a user to perform a word search on a record, including within the Audit Trail, allowing a user to find data within the section (heading), or search for a specific section (heading).
DCH-454	A supplier system MUST offer a configurable viewing of the record as per their own internal workflow requirements.
DCH-456	A system supplier MUST ensure that ALL data recorded against a child's ² record is aligned to the standard.
DCH-458	<p>A supplier system MUST ensure that for each record entry within a section (heading), the performing professional, date and location details are recorded and stored.</p> <p>Where deemed unnecessary by supplier user groups, system suppliers may choose not to display certain stored data items to users.</p>

2.8 Subscription Requirements

Requirement ID	Description
DCH-336	<p>A supplier system MUST be able to create an explicit subscription for an NHS Number. Only applicable if the child is not within a generic subscription. This SHOULD be based on triggering a subscription request once a child is added on via the 'natural work flow' of the system.</p> <p>https://developer.nhs.uk/apis/ems-beta/explore_create_subscription.html</p>
DCH-393	<p>A supplier system MUST be able to delete an NHS Number from an explicit subscription. Guidance is located https://developer.nhs.uk/apis/ems-beta/explore_delete_subscription.html</p> <p>Any explicit subscriptions SHOULD only be active for children under the organisation's direct care. Explicit subscriptions for a patient should be stopped when the child leaves the organisation's direct care. This can be done either by deleting the subscription using the API or by including the 'end' element as part of the subscription resource.</p>
DCH-354	A supplier system COULD alert/notify a user that an explicit subscription is due to come to an end.

¹ <http://digital.nhs.uk/isce/publication/dcb3009>

² See glossary for definition of a child

DCH-480	A supplier system MUST display to an 'admin/appropriate user' that a subscription API request has been rejected from the NEMS along with the appropriate error code and associated message.
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2.9 Audit Requirements

Requirement ID	Description
DCH-487	<p>A supplier MUST keep an audit log of all interactions with the subscription API. In addition to NEMS audit requirements, the following items must be included:</p> <ul style="list-style-type: none"> • Explicit Subscription ID
DCH-396	<p>A supplier system MUST keep an audit log of all received events. , the following items must be included:</p> <p>Event reason - New, Update or Delete</p>