

# DCB1077 Automatic Identification and Data Capture (AIDC) for Patient Identification

## Change Specification

March 2020



**Information and technology**  
**for better health and care**

# Data Coordination Board

This information standard (DCB1077) 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
- Requirements Specification
- Implementation Guidance.

An Information Standards Notice (DCB1077 Amd 67/2018) has been issued as a notification of use and implementation timescales. Please read this alongside the documents for the standard.

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# 1 Overview

<b>STANDARD</b>	
<b>Standard Number</b>	<b>DCB1077</b>
<b>Title</b>	Automatic Identification and Data Capture (AIDC) for Patient Identification
<b>Release</b>	Amd 67/2018
<b>Type</b>	Change Specification
<b>Definition</b>	<p>This Standard defines how to encode the NHS approved patient identifiers for identity bands into the GS1 DataMatrix barcode (a two-dimensional barcode) and covers production, verification and printing rules for the barcode. The resulting data set is the AIDC for Patient Identification Data Set.</p> <p>Previously known as the ISB 1077 standard, DCB1077 has been updated to align with Patient Identification requirements of NHS Improvement and ensure compliance to GS1 Standards. This release includes an update to the existing data set and supporting information, summarised below:</p> <ul style="list-style-type: none"> <li>• New data items introduced: <ul style="list-style-type: none"> <li>○ Service Relation Instance Number (SRIN) for episode information</li> <li>○ Global Location Number (GLN) to identify a hospital location</li> </ul> </li> <li>• Amended data item numbers, data item names, data format and inclusion requirements (i.e. Mandatory, Required or Optional)</li> <li>• Supporting Information updated to remove and replace deprecated and withdrawn references</li> <li>• Conformance criteria updated to provide corresponding criterion for each MUST/MUST NOT requirement</li> </ul> <p>This document provides full details of the changes that have been made to the Automatic Identification and Data Capture (AIDC) for Patient Identification – DCB1077 standard that was originally detailed in the ISB 1077 standard of the same name.</p>

# Helpdesk

## 2.1 Contact Information

For further information and support on DCB1077: AIDC for Patient Identification standard, please note the following details:

Developer	
Organisation	GS1 UK
Email Address	<a href="mailto:healthcare@gs1uk.org">healthcare@gs1uk.org</a>
Phone number	Freephone 0808 178 8799 or 020 7092 3501 (available Mon-Fri 9am-5pm)

## 2.2 Useful resources

**GS1 UK** – [www.gs1uk.org](http://www.gs1uk.org)

Visit the GS1 UK webpage to request a free wristband compliance check and access further information and support on all GS1 Standards. Head to [GS1 UK's Healthcare Portal](#) to see how GS1's global standards for unique identification and AIDC technologies are used within the Healthcare sector to improve patient safety and drive clinical and operational efficiencies.

**NHS Data Model and Dictionary** – [www.datadictionary.nhs.uk](http://www.datadictionary.nhs.uk)

The NHS Data Model and Dictionary provides a reference point for approved Information Standards Notices to support health care activities within the NHS in England. All data items outlined in this document are linked to their equivalent data element pages in the NHS Data Model and Dictionary.

**NHS Digital: Standards and Collections** – [www.digital.nhs.uk](http://www.digital.nhs.uk)

Access an alphabetical list of all published Data Coordination Board (DCB) standards and collections. The list is updated on a monthly basis, following the approval of new items, and changes, by the Data Coordination Board.

# 3 Guidance by User Group

## 3.1 Existing users

For existing users, with ISB 1077 compliant wristbands, this Change Specification should be reviewed to ensure all updates made to DCB1077 are clearly understood and can be implemented correctly.

## 3.2 New users

New users, looking to implement DCB1077 AIDC for Patient Identification, do not need to review this Change Specification. Instead, new users should review both the Requirements Specification and Implementation Guidance.

## 4 Changes to Supporting Information

The following changes to Supporting Information and document references have been made:

### 4.1 Related Standards

Reference	Title	Status
ISB 1503	Common User Interface – Date Display	Deleted
ISB 1504	Common User Interface – NHS Number Input and Display	Deleted
ISB 1506	Common User Interface – Patient Name Input and Display	Deleted
ISB 1501	Common User Interface – Time Display – Operational Standard	Deleted
ISB 0149-01	NHS Number for General Practice	Deleted
ISB 0149-02	NHS Number for Secondary Care	Deleted
ISB 0129	Patient Safety Risk Management System - Manufacture of Health Software	Deleted
ISB 0160	Patient Safety Risk Management System - Deployment and Use of Health Software	Deleted
ISO/IEC 15416:2002	Automatic identification and data capture techniques. Bar code print quality test specification. Linear symbols	Deleted
ISO/IEC 15426-1:2006	Automatic identification and data capture techniques. Bar code verifier conformance specification. Linear symbols	Deleted
ISB 0149	NHS Number Standard Specification	New
DCB0129	Clinical Risk Management: its Application in the Manufacture of Health IT Systems	New
DCB1060	Clinical Risk Management: its Application in the Deployment and Use of Health IT Systems	New
ISO/IEC 15415	Information technology; automatic identification and data capture techniques; barcode print quality test specification; two-dimensional symbols	New
ISO/IEC 15426-2	Information technology; automatic identification and data capture techniques; barcode verifier conformance specification - Part 2: Two-dimensional symbols	New
ISB 1555	Birth Notifications	New

### 4.2 Supporting Guidance

Reference*	Title	Status
	NPSA – Framework for Action – Right Patient Right Care	Deleted
NPSA/2005/SPN011	Identity bands for hospital inpatients improve safety	Deleted
NPSA/2007/SPN024	Standardising identity bands improves safety	Deleted
NPSA/2009/SPN002	Risk to patient safety of not using the NHS number as the national identifier for all patients	Deleted
N/A	NHS Numbers for Newborn Screening – OBS for the Blood Spot Card Label	Deleted
N/A	Learning from patient safety incidents	New
N/A	Newborn blood spot (NBS) screening programme	New
Release 19.1 *	GS1 General Specifications	New
Release 2.5.1	GS1 DataMatrix Guideline: an introduction and technical overview	New

\* GS1 General Specifications are regularly updated, so whilst a release number is noted here for reference, the link provided will always direct users to the most recent version of the document.

## 5 Changes to Requirements

### 5.1 Information Specification

All amendments have been noted as “changed”, “deleted” or “new” with additional details of changes:

#	Requirements	Status	Details
<b>General</b>			
1.	When implementing DCB1077: AIDC for Patient Identification, the fundamental standard <a href="#">ISB 0108: AIDC Automatic Identification and Data Capture</a> <b>MUST</b> be used as a reference guide.	Changed	Supporting information updated
2.	This standard <b>SHOULD</b> be implemented alongside the existing national standards, notices and guidance for patient identifiers and identity bands, including <a href="#">ISB 0099 Patient Identifiers for Identity Bands</a> . These are all listed in Sections 2.1 and 2.2 of this document.	Changed	Supporting information updated
3.	When designing and manufacturing AIDC solutions / systems, for purposes of Patient Identification in the NHS, <a href="#">DCB0129: Application of Clinical Risk Management relating to the Manufacture of Health IT Systems</a> <b>SHOULD</b> be used to identify and acceptably manage clinical safety risk associated with solution / system design.	Changed	Supporting information updated
4.	When procuring, deploying and using AIDC solutions / systems for purposes of Patient Identification in the NHS, <a href="#">DCB0160: Application of Clinical Risk Management relating to the Deployment and Use of Health IT Systems</a> <b>SHOULD</b> be used to identify and acceptably manage clinical safety risk associated with context of use and human factors.  While not in scope for this standard, it is assumed that NHS organisations will address risks and issues related to identity band production, verification, fitting and use as part of wider patient identification safety and information governance risk management for that NHS organisation. This standard <b>MAY</b> also be used as a framework for developing an AIDC for Patient Identification implementation project plan.	Changed	Supporting information updated
5.	<del>All NHS identity bands <b>MUST</b> carry the encoded AIDC for Patient Identification Dataset (found at Section 4) according to the instructions outlined in Section 3 – Concept of Operation. Examples can be found at Section 5.</del>	Deleted	Removed duplication
5.	NHS organisations <b>SHOULD NOT</b> procure AIDC technological solutions for encoding the AIDC for Patient Identification Data set unless they can demonstrate compliance with this standard.	Changed	Moved (from Information Specification)
6.	This standard <b>MUST NOT</b> be used on documentary artefacts other than the patient identity band IF the intended purpose is to identify the document itself and not the patient.	New	Moved (from deleted section)
<b>Data Carriers</b>			
7.	The data carrier which <b>MUST</b> be used to carry the AIDC for Patient Identification Data set is the GS1 DataMatrix Symbol. Refer to Permitted Data Carriers in Section 5.	Changed	Reference updated

#	Requirements	Status	Details
8.	It is recommended that, where space permits, all identity bands SHOULD carry two GS1 DataMatrix Symbols, containing exactly the same AIDC for Patient Identification Data Set, one at each end of the identity band. This is for ease of scanning and as a backup, should one fail or become destroyed.	Changed	Errata
9.	GS1 DataMatrix Symbol production, verification and printing <b>MUST</b> be conducted according to the technical instructions and guidance in GS1 document: " <a href="#">GS1 DataMatrix Guideline: an introduction and technical overview</a> ".	Changed	Supporting information updated
10	For legacy purposes and to ease migration, NHS organisations MAY implement dual barcoding on identity bands, i.e. a GS1 DataMatrix Symbol containing the AIDC for Patient Identification Data set AND a 1D / linear barcode containing the NHS Number or local hospital / PAS number. The linear barcode MAY be a Code 39** or Code 128* and <b>MUST NOT</b> be a GS1-128 barcode as these are too wide to fit onto identity bands. This standard assumes that identity bands are not transferred between trusts.  *Code 128 is a non GS1 barcode - <a href="https://en.wikipedia.org/wiki/Code_128">https://en.wikipedia.org/wiki/Code_128</a> **Code 39 is a non GS1 barcode - <a href="https://en.wikipedia.org/wiki/Code_39">https://en.wikipedia.org/wiki/Code_39</a>	Changed	Reference updated
11	Implementation of dual barcodes <b>MUST NOT</b> compromise the human readable information on the identity band, nor the GS1 DataMatrix Symbol.	No change	N/A
12	This Standard Specification does not replace the NHS newborn blood spot (NBS) screening Card Label. However, it MAY be used as additional supporting guidance in meeting the NHS newborn blood spot (NBS) screening card label requirements, due to the relationship between them.  Systems which have been designed / configured to produce both the NHS number for babies as per the Birth Notifications Service / baby identity bands AND the Newborn Screening Blood Spot Card Label SHOULD be updated so that the GS1 DataMatrix Symbol containing the AIDC for Patient Identification Data set is printed on the identity band and the GS1-128 barcode containing the NHS Number is printed on the Blood Spot Card Label.	Changed	Supporting information updated  Moved (from Information Specification)
<b>Encoding the AIDC for Patient Identification Data set</b>			
13	The AIDC for Patient Identification Data set (refer to Section 7) <b>MUST</b> be used exactly as specified when encoding the data string for barcoded patient identity bands. The data set will be published and maintained by the <a href="#">NHS Data Model and Dictionary</a> . Mandatory, Required, and Optional data items are indicated for adult and baby identity bands and <b>MUST</b> be adhered to. Examples can be seen in section 8.	Changed	Reference updated
14	The GS1 Identification Key to be used for the encoding of patient identifiers on identity bands <b>MUST</b> be the Global Service Relation Number (GSRN). Refer to Section 4.3 for a high-level description and the <a href="#">GS1 General Specifications</a> (Section 4.7) for full details and allocation rules.	Changed	Reference updated

#	Requirements	Status	Details
15	There are up to 5 sections in a complete encoded data string for patient identification: The GSRN (containing the NHS Number); followed by up to 4 additional data strings: <i>Episode Information (SRIN)</i> ; Hospital Identifiers; Patient Descriptive Data; and Baby Details. Each data string <b>MUST</b> be identified by the appropriate GS1 Application Identifier as outlined in Sections 4.3 (high-level) and 7 (full data set).	Change	Data set details updated
<del>13</del>	<del>The GSRN data string MUST be identified by the Application Identifier '8018'. The GSRN is a required data string; It MUST be used in all cases.</del>	Deleted	Removed duplication
<del>14</del>	<del>The data string Hospital Identifiers MUST be identified by Application Identifier '91'. Hospital Identifiers is an optional data string; It MUST be used if the NHS Number is unavailable, invalid or unverified; It MAY be used if the NHS Number is available, valid and verified.</del>	Deleted	Removed duplication
<del>15</del>	<del>The data string Patient Descriptive Data MUST be identified by Application Identifier '93'. Patient Descriptive Data is a required data string; It MUST be used in all cases.</del>	Deleted	Removed duplication
<del>16</del>	<del>The data string Baby Details MUST be identified by Application Identifier '92'. Baby Details is a REQUIRED data string; It MUST be used if the patient is a newborn baby / neonate.</del>	Deleted	Removed duplication
16	<p>GS1 Application Identifiers (AIs) 91 through to 99 are specifically allocated to "Company Internal Information" (Refer to Section 3.10.2. of the <a href="#">GS1 General Specifications</a>).</p> <p>The NHS has allocated AIs 91, 92 and 93 for Hospital Identifiers, Baby Details and Patient Descriptive Data respectively, for the specific purpose of encoding on patient identity bands. They <b>MUST NOT</b> be used by the NHS to identify anything else.</p> <p>AI 94 is NOT valid for the AIDC Patient Identification Data Set.</p> <p>AIs 95 through to 97 inclusive, have been reserved by the NHS for future allocation or other use.</p> <p>All allocation of AIs 91 through to 97 for the NHS will be subject to formal NHS Data Model and Dictionary Change Requests and published in the <a href="#">NHS Data Model and Dictionary</a>.</p> <p>AIs 98 and 99 have been put aside for local NHS organisation allocation and use. See <a href="#">GS1 Application Identifier (Local)</a> in the NHS Data Model and Dictionary.</p>	Changed	Data set details updated

#	Requirements	Status	Details
17	Additional optional data relating to the patient that is fixed, MAY be added to the end of the encoded required data set by local decision, e.g. wristband size indicator or alerts, etc. However, such optional data items are out of scope for this standard. Neither are they mandated or recommended by NHS Improvement as formal data items for the identity band. As such, any decision to encode local optional data items for use on the identity band <b>MUST</b> be subject to a comprehensive clinical safety risk assessment for design and use in line with DCB0160 and DCB0129. Such optional data items <b>MUST NOT</b> include variable data about the patient such as the hospital ward or department they are in, as this could lead to multiple identity band production for the same patient. Optional data items <b>MUST</b> be identified by an appropriate GS1 Application Identifier for "Company Internal Information", i.e. either AI 98 or 99. Such optional data items <b>MUST NOT</b> be identified by any other GS1 Application Identifier.	Changed	Supporting information updated
18	Barcodes SHOULD NOT be the sole mechanism for identifying the patient. Any human readable patient details printed on wristbands <b>MUST</b> conform to <a href="#">ISB 0099: Patient Identifiers for Identity Bands</a> .	Changed	Supporting information updated
19	The complete data string for the GS1 DataMatrix Symbol <b>MUST NOT</b> be printed in human readable form on the patient identity band; It is too long and would cause end user confusion.	Changed	Removed duplication
20	The GS1 Unique Organisation Prefix used in the GSRN number (data item 1.1) <b>MUST</b> be the fixed value of 5050898 to identify NHS Digital (as the service provider of the NHS Number). It <b>MUST NOT</b> be the NHS Trust GS1 Unique Organisation Prefix.	Changed	Supporting information updated
21	If the NHS Number is not known, the NHS Number portion (including the NHS Number check digit) of the data string <b>MUST</b> be set to "9999999999" and the GSRN Check Digit <b>MUST</b> be set to "3" – making the data set for the GSRN always "50508989999999993".	No change	N/A
22	The GSRN Check Digit <b>MUST</b> be calculated according to the instructions at <a href="#">Appendix 1</a> .	No change	N/A
23	The data item "Time of Birth (part of data string for Patient Descriptive Data) and the data string for Baby Details are only required for neonates (i.e. newborn babies only) and is only applicable to recordable / formal births. Refer to <a href="#">ISB 1555 Birth Notifications</a> for further information relating to the collection of data for a neonate and recordable / formal births.	New	Supporting information updated

## 5.2 Conformance Criteria

Amended to ensure each MUST/MUST NOT requirement listed in the Information Specification has an equivalent Conformance Criterion to check compliance:

#	Conformance Criteria	Status
1.	<del>With immediate effect, all new identity band systems and solutions procured, deployed and used by the NHS can demonstrate compliance with the Automatic Identification and Data Capture (AIDC) for Patient Identification Operational Standard.</del>	Deleted
2.	<del>From 1 April 2012, all NHS Trusts have established a clear migration plan to ensure existing identity band systems and solutions adhere to the AIDC for Patient Identification Operational Standard by 1 October 2013.</del>	Deleted
3.	<del>From 1 October 2013, all identity bands produced in the NHS carry a GS1 DataMatrix Symbol containing at least the NHS Number, First Name, Last Name and Date of Birth of the patient.</del>	Deleted
4.	<del>From 1 October 2013, all identity bands produced in the NHS can clearly and unambiguously display the indicated AIDC for Patient Identification dataset in both human readable and bar coded format.</del>	Deleted
5.	<del>The GS1 DataMatrix Symbol can be accurately scanned in 100% of cases.</del>	Deleted
6.	<del>A clinical safety risk assessment has been conducted by each NHS organisation prior to the implementation of this standard. The clinical safety assessment should be in line with the standard: ISB 0160: Patient Safety Risk Management for the Deployment and Use of Health Software.</del>	Deleted
7.	<del>There are no clinical safety near misses or serious untoward incidents (SUIs) reported as a direct result of the AIDC for Patient Identification standard.</del>	Deleted
<b>General</b>		
1.	Fundamental standard <a href="#">ISB 0108: AIDC: Automatic Identification and Data Capture</a> is referenced when implementing DCB1077: AIDC for Patient Identification.	New
6.	Document identification is out of scope for DCB1077. If a document is to be identified, refer to <a href="#">ISB 0108: AIDC: Automatic Identification and Data Capture</a> to apply a GS1 Global Document Type Identifier (GDTI).	New
<b>Data Carriers</b>		
7.	A GS1 DataMatrix symbol is used to carry the AIDC Patient Identification Data Set.	New
9.	The GS1 DataMatrix symbol is configured and verified according to the technical instruction provided in the <a href="#">GS1 DataMatrix Guideline</a> can be scanned in 100% of cases.	New
10.	If dual barcoding is required for an identity band, the 1D / linear barcode which is used with the GS1 DataMatrix symbol, is a Code 39 or Code 128, not a GS1-128 barcode.	New
11.	If dual barcoding is required for an identity band, the human readable information and the GS1 DataMatrix symbol is not compromised in any way.	New
<b>Encoding the AIDC for Patient Identification Data Set</b>		
13.	When barcoding for patient identity bands, all Mandatory, Required and Optional data items are encoded in the AIDC for Patient Identification Data Set as outlined in sections 4 and 7. Examples of encoded identity bands can be found in section 8.	New
14.	A Global Service Relation Number (GSRN) is allocated and encoded in the AIDC for patient identity bands, as outlined in sections 4 and 7 and according the GS1 General Specification rules.	New

#	Conformance Criteria	Status
15.	Each section of the encoded data string for patient identification is correctly identified with a GS1 Application Identifier as outlined in sections 4 and 7.	New
16.	GS1 Application Identifiers 91, 92 and 93 are only used for Hospital Identifiers, Baby Details and Patient Descriptive Data respectively, for the specific purpose of encoding on patient identity bands and is not used by the NHS to identify anything else.	New
17.	Any decision to encode optional data items for use on the identity bands is subject to a comprehensive clinical safety risk assessment for design and use in line with DCB0160 and DCB0129. Any optional data items approved for use on the identity band does not include any variable data about the patient such as the hospital ward or department they are in. If any optional data items are to be encoded on an identity bands, they are identified with the GS1 Application Identifiers '98' or '99' only.	New
18.	Any human readable patient details printed on wristbands is compliant with ISB 0099: Patient Identifiers for Identity Bands.	New
19.	The complete data string for the GS1 DataMatrix symbol is not printed in human readable form on the patient identity band.	New
20.	The GS1 Unique Organisation Prefix used in the GSRN number (data item 1.2) is the fixed value of 5050898 to identify NHS Digital (as the service provider of the NHS Number) and is not the NHS Trust GS1 Unique Organisation Prefix.	New
21.	If the NHS Number is missing, invalid or unverified, the encoded GSRN data set will be '5050898999999999993', as the NHS number is '9999999999' and the GSRN check digit is '3'.	New
22.	When the NHS Number is known, the GSRN Check Digit is calculated in accordance with instructions outlined in section 11.1.	New

## 6 Overview of changes to the AIDC for Patient Identification Data Set

### 6.1 NEW: Service Relation Instance Number (SRIN)

When the ISB 1077 standard was originally written and released there was no GS1 standard for “Episode Information”. Since then, GS1 has added the Service Relation Instance Number (SRIN) to its standards as an optional extension to the Global Service Relation Number (GSRN).

The GSRN is the primary, mandatory identifier that includes the NHS Number and is a fixed 18 digits in length. The SRIN is optional and has a variable structure of up to 10 digits in length. The SRIN MUST be used in conjunction with the GSRN if used. Further information can be found in the Requirements Specification, in Section 4.2.

### 6.2 NEW: Global Location Number (GLN)

In the original ISB 1077 standard, there was a requirement to use a GS1 Global Company Prefix (GCP) when the local hospital identifier was used without a validated or verified NHS number. Use of the GCP by itself was never an accepted good practice, as this does not align with GS1 Standards and use of the GCP in this context does not identify anything.

The decision to replace the GCP with a GS1 Global Location Number (GLN) allows trusts to incorporate a GLN into the AIDC for Patient Identification Data Set, in line with the requirements of the Department of Health’s eProcurement Strategy (2014).

Use of the GLN, whilst optional, allows users to identify the hospital where the wristband was printed or applied to the patient. This change allows for other uses of the GLN identifier to be adopted within hospitals. Further information GLN’s may be found in the fundamental standard ISB 0108 AIDC for NHS England, in section 3.2.3.

### 6.3 Organisation Identifier – Code of Provider (ODS code)

In the original ISB 1077 standard, the “Organisation Identifier – Code of Provider” was either three or five alphanumeric characters and was not mandatory. **This is now between three and six alphanumeric characters (i.e. minimum of three and maximum of six characters) and is now a MANDATORY data item.**

### 6.4 Local Patient Identifier – Extended

In the original ISB 1077 standard, the “Local Patient Identifier – Extended” was variable, up to 10 alphanumeric characters and was not mandatory. **This is now variable up to 20 alphanumeric characters and is now a MANDATORY data item.**

## 7 Change Report: AIDC for Patient Identification Data Set

The following section lists the complete AIDC for Patient Identification and details of each change to the data set. This data set will be published in the [NHS Data Model and Dictionary](#) (\*click on Data Element / Attribute for link).

Please note, there is no data flow diagram available for this data set as this standard does not define any exchange of data.

The Mandatory, Required or Optional (M/R/O) column indicates the recommendation for the inclusion of data:

**M = Mandatory:** this data element is mandatory and the technical process (e.g. submission of the data set, production of output etc) cannot be completed without this data element being present.

**R = Required:** NHS business processes cannot be delivered without this data element.

**O = Optional:** the inclusion of this data element is optional as required for local purposes.

Data Item No.	Data Item	Data Element / Attribute *	Description	Data Format	Fixed or Variable	Permissible Values	M R O	GS1 AI	Comments	Status	Details
1.0	Application Identifier (AI)	<a href="#">GS1 APPLICATION IDENTIFIER (GLOBAL)</a>	GS1 Application Identifier code which identifies the following data element string	n4	F	8018 = Global Service Relation Number	M	N/A	Fixed value of 8018. The GS1 Application Identifier of 8018 means the data element string is a GS1 Global Service Relation Number. A GSRN always has 18 digits (numeric only).	Updated	<ul style="list-style-type: none"> <li>Data Item No. was "1.1"</li> <li>Data Element/Attribute was "N/A"</li> </ul>

Data Item No.	Data Item	Data Element / Attribute *	Description	Data Format	Fixed or Variable	Permissible Values	MRO	GS1 AI	Comments	Status	Details
1.1	NHS Digital GS1 UK Unique Organisation Prefix	<a href="#">GS1 UNIQUE ORGANISATION PREFIX NUMBER</a>	A globally unique number assigned to NHS Digital by GS1.	n7	F	5050898 = NHS Digital	M	8018	The fixed value of 5050898 <b>MUST</b> be used as it is the NHS Digital GS1 Company Prefix (GCP). The local organisation GCP <b>MUST NOT</b> be used. Forms the beginning of the GS1 GSRN.	Updated	<ul style="list-style-type: none"> <li>Data Item No. was "1.2"</li> <li>Data Item was "NHS Connecting for Health GS1 Unique Organisation Prefix"</li> <li>Data Element/Attribute was "N/A"</li> <li>Description was "NHS Connecting for Health (NHS CFH)"</li> <li>Comments amended to reflect Data Item changes</li> </ul>

Data Item No.	Data Item	Data Element / Attribute *	Description	Data Format	Fixed or Variable	Permissible Values	MRO	GS1 AI	Comments	Status	Details
1.2	NHS Number	<u>NHS NUMBER</u>	The NHS number is a unique identifier for a PATIENT within the NHS	n10	F	e.g. 123456789 0	R	8018	<p>The NHS Number is a fixed 10 digits (numeric only) and is REQUIRED if known. IF the NHS Number is missing, invalid or unverified, THEN set the value to 9999999999.</p> <p>Forms part of the GS1 GSRN. Whilst human readable form is managed by local solution for wristband design, the NHS Number SHOULD be displayed in the 3,3,4 format e.g. 123 456 7890, in accordance with <a href="#">ISB 0099 Patient Identifiers for Identity Bands</a>.</p> <p>IF the NHS Number is not known, THEN the human readable form <b>MUST</b> be blank.</p>	Updated	<ul style="list-style-type: none"> <li>Data Item No. was "1.3"</li> <li>Description shortened</li> <li>Comments amended to reflect changes to items 3.1 and 3.2; and updated Supporting Information</li> </ul>

Data Item No.	Data Item	Data Element / Attribute *	Description	Data Format	Fixed or Variable	Permissible Values	MRO	GS1 AI	Comments	Status	Details
1.3	GSRN Check Digit	<a href="#">GS1 GSRN CHECK DIGIT</a>	A Modulo 10 check digit for the GSRN string	n1	F	e.g. 1	M	8018	Ensures the GSRN is correct. Refer to <a href="#">Appendix 1</a> for check digit calculation for the 18-digit GSRN. If the NHS Number is not known, invalid or unverified, set this value to 3. The final part of the GS1 GSRN.	Updated	<ul style="list-style-type: none"> <li>Data Item No. was "1.4"</li> <li>Data Element/Attribute was "N/A"</li> <li>Comments amended to reflect updated reference</li> </ul>
2.0	Application Identifier (AI)	<a href="#">GS1 APPLICATION IDENTIFIER (GLOBAL)</a>	GS1 Application Identifier code which identifies the following data element string.	n4	F	8019 = Service Relation Instance Number	O	N/A	Fixed value of 8019. The GS1 Application Identifier of 8019 means the data element string is a GS1 Service Relation Instance Number. A SRIN is variable up to 10 digits (numeric only).	New	<ul style="list-style-type: none"> <li><b>Refer to section 6.1 for details of new data item: SRIN</b></li> </ul>

Data Item No.	Data Item	Data Element / Attribute *	Description	Data Format	Fixed or Variable	Permissible Values	MRO	GS1 AI	Comments	Status	Details
2.1	Service Relation Instance Number	<a href="#">GS1 SERVICE RELATION INSTANCE NUMBER</a>	A unique number to identify each ACTIVITY within the Health Care Provider episode of care.	max n10	V	e.g. 123456789 0	O	8019	This data element is variable, up to 10 digits (numeric only) and is OPTIONAL but <b>MUST</b> be used in conjunction with the GSRN if used.	New	<ul style="list-style-type: none"> <li>Refer to section 6.1 for details of new data item: SRIN</li> </ul>
3.0	Application Identifier (AI)	<a href="#">GS1 APPLICATION IDENTIFIER (INTERNAL)</a>	GS1 Application Identifier code which identifies the following data element string.	n2	F	91 = Hospital Identifiers	M	N/A	Fixed value of 91. The AI of 91 identifies the code number is a GS1 Application Identifier for "Company Internal Information". The NHS has allocated the AI of 91 to "Hospital Identifiers".	Updated	<ul style="list-style-type: none"> <li>Data Item No. was "1.5"</li> <li>Data Element/Attribute was "N/A"</li> <li>Fixed or Variable corrected from "V"</li> <li>Comments amended to reflect Data Item changes; and changes to items 3.1 and 3.2</li> </ul>

Data Item No.	Data Item	Data Element / Attribute *	Description	Data Format	Fixed or Variable	Permissible Values	M R O	GS1 AI	Comments	Status	Details
3.1	Organisation Identifier	<u>ORGANISATION IDENTIFIER (CODE OF PROVIDER)</u>	This is the ORGANISATION IDENTIFIER of the ORGANISATION acting as a Health Care Provider	min an3 max an6	V	e.g. RAN or Q30	M	91	Data element delimited as COMMA SEPARATED. Variable between 3 and 6 alphanumeric characters. For NHS organisations, it is a code that is managed by the Organisation Data Service (ODS), NHS Prescription Services or NHS Dental Services. This data item is now MANDATORY.	Changed	<ul style="list-style-type: none"> <li>Data Item No. was "1.6"</li> <li>Data Item was "Organisation Code"</li> <li>Data Element/Attribute was "ORGANISATION CODE"</li> <li><b>Data Format was "an3 or an5"</b></li> <li><b>M/R/O was "R"</b></li> <li><b>Refer to section 6.3 for details of <i>changed data item</i>: ODS code</b></li> <li>Comments amended to reflect Data Item changes</li> </ul>

Data Item No.	Data Item	Data Element / Attribute *	Description	Data Format	Fixed or Variable	Permissible Values	M R O	GS1 AI	Comments	Status	Details
3.2	Patient Hospital Number	<u>LOCAL PATIENT IDENTIFIER (EXTENDED)</u>	The hospital's local identifier for the patient, e.g. PAS Number. This number is used to identify a PATIENT uniquely within a Health Care Provider.	max an20	V	e.g. 567823	M	91	Data Element delimited as COMMA SEPARATED. Variable up to 20 alphanumeric characters. It may be different from the PATIENT's case note number and may be assigned automatically by the computer system. This data item is now MANDATORY.	Changed	<ul style="list-style-type: none"> <li>Data Item No. was "1.7"</li> <li>Data Element/Attribute was "LOCAL PATIENT IDENTIFIER"</li> <li>Description shortened</li> <li><b>Data Format was "an10"</b></li> <li><b>M/R/O was "R"</b></li> <li><b>Refer to section 6.4 for details of <i>changed</i> data item: Local Patient Identifier</b></li> <li>Comments amended to reflect Data Item changes</li> </ul>

Data Item No.	Data Item	Data Element / Attribute *	Description	Data Format	Fixed or Variable	Permissible Values	MRO	GS1 AI	Comments	Status	Details
3.3	GS1 Unique Global Location Number	<a href="#">GS1 GLOBAL LOCATION NUMBER</a>	The GS1 GLN for the local NHS Trust / organization	n13	F	e.g. 505520568 3331	O	91	Data Element delimited as COMMA SEPARATED. Fixed 13 digits (numeric only) and is allocated by the trust from their GS1 company prefix (GCP) and is used to identify the local hospital. This data item is OPTIONAL.	New	<ul style="list-style-type: none"> <li>Replaces data item "NHS Trust GS1 Unique Organisation Prefix" (item 1.8 in ISB 1077)</li> <li><b>Refer to section 6.2 for details of new data item: GLN</b></li> </ul>

Data Item No.	Data Item	Data Element / Attribute *	Description	Data Format	Fixed or Variable	Permissible Values	M R O	GS1 AI	Comments	Status	Details
4.0	Application Identifier (AI)	<u>GS1 APPLICATION IDENTIFIER (INTERNAL)</u>	GS1 Application Identifier code which identifies the following data element string.	n2	F	93 = Patient Descriptive Data	R	N/A	Fixed value of 93. AI of 93 identifies the code number is a GS1 Application Identifier for "Company Internal Information". The NHS has allocated the AI of 93 to "Patient Descriptive Data". Data elements 4.0 to 4.3 are REQUIRED for ALL patient wrist / identity bands if known. Data element 4.4 becomes MANDATORY for neonates and new-born baby wrist / identity bands.	Updated	<ul style="list-style-type: none"> <li>• Data Item No. was "2.1"</li> <li>• Data Element/Attribute was "N/A"</li> <li>• Fixed or Variable corrected from "V"</li> <li>• M/R/O corrected from "M" – only Mandatory when Patient Descriptive Data is known (i.e. items 4.1 to 4.4)</li> <li>• Comments amended to reflect Data Item changes; and updated references</li> </ul>

Data Item No.	Data Item	Data Element / Attribute *	Description	Data Format	Fixed or Variable	Permissible Values	MRO	GS1 AI	Comments	Status	Details
4.1	Last Name	<a href="#">PERSON FAMILY NAME</a>	That part of a PERSON's name which is used to describe family, clan, tribal group, or marital association.	max an35	V	e.g. SMITH	R	93	Data element delimited as COMMA SEPARATED. Variable up to 35 characters. Whilst human readable form is managed by local solution for wristband design, the Family Name <b>MUST</b> precede the Given Name and be displayed using capitals, in accordance with <a href="#">ISB 0099 Patient Identifiers for Identity Bands</a> .	Updated	<ul style="list-style-type: none"> <li>Data Item No. was "2.2"</li> <li>Data format updated with "max"</li> <li>Comments amended to reflect Data Item changes; and updated Supporting Information</li> </ul>

Data Item No.	Data Item	Data Element / Attribute *	Description	Data Format	Fixed or Variable	Permissible Values	MRO	GS1 AI	Comments	Status	Details
4.2	First Name	<a href="#">PERSON GIVEN NAME</a>	The forename or given name of a PERSON	max an35	V	e.g. David	R	93	Data element delimited as COMMA SEPARATED. Variable up to 35 characters. Whilst human readable form is managed by local solution for wristband design, the Given Name <b>MUST</b> follow the Family Name and be displayed using initial capitals only, in accordance with <a href="#">ISB 0099 Patient Identifiers for Identity Bands</a> .	Updated	<ul style="list-style-type: none"> <li>Data Item No. was "2.3"</li> <li>Data format updated with "max"</li> <li>Comments amended to reflect Data Item changes; and updated Supporting Information</li> </ul>

Data Item No.	Data Item	Data Element / Attribute *	Description	Data Format	Fixed or Variable	Permissible Values	MRO	GS1 AI	Comments	Status	Details
4.3	Date of Birth	<a href="#">DATE OF BIRTH (PATIENT IDENTIFICATION)</a>	The date of birth of the patient	an11 DD-Mmm-CCYY	F	e.g. 21-Nov-1993	R	93	Data element delimited as COMMA SEPARATED. Fixed 11 characters, including “-“ separator. Whilst human readable form is managed by local solution for wristband design, the date format SHOULD be displayed in the short date format DD-Mmm-CCYY e.g. 21-Nov-1993, in accordance with <a href="#">ISB 0099 Patient Identifiers for Identity Bands.</a>	Updated	<ul style="list-style-type: none"> <li>Data Item No. was “2.3”</li> <li>Comments amended to reflect updated Supporting Information</li> </ul>

4.4	Time of Birth	<u><a href="#">TIME OF BIRTH (PATIENT IDENTIFICATION)</a></u>	The time of birth of the neonate; only required if the patient is a newborn baby.	an5 HH:mm	F	e.g. 15:30	R	93	Data element delimited as COMMA SEPARATED. Fixed 5 characters, including “:” separator. This data element is REQUIRED in that it becomes MANDATORY for neonates. Refer to <a href="#">ISB 1555 Birth Notifications</a> for further information on data required for neonates. Whilst human readable form is managed by local solution for wristband design, the time format <b>MUST</b> be displayed as 24-hour clock with the hours and minutes separated with a colon e.g. 15:30. It should be printed immediately to the right of the data element 4.3 'Date of Birth'.	Updated	<ul style="list-style-type: none"> <li>• Data Item No. was “2.5”</li> <li>• Description enhanced</li> <li>• Comments amended to reflect updated Supporting Information and updated references</li> </ul>
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5.0	Application Identifier (AI)	<u>GS1 APPLICATION IDENTIFIER (INTERNAL)</u>	GS1 Application Identifier code which identifies the following data element string.	n2	F	92 = Baby Details	R	N/A	Fixed value of 92. AI of 92 identifies the code number is a GS1 Application Identifier for "Company Internal Information". The NHS has allocated the AI of 92 to "Baby Details". Data elements 5.0 to 5.2 are REQUIRED in that they become MANDATORY for newborn babies / neonates in the absence of a valid and verified NHS Number. Data element 5.3 is OPTIONAL. IF the NHS Number is valid and verified, THEN data elements 5.1 and 5.2 are OPTIONAL but highly recommended.	Updated	<ul style="list-style-type: none"> <li>• Data Item No. was "3.1"</li> <li>• Data Element/Attribute was "N/A"</li> <li>• Fixed or Variable corrected from "V"</li> <li>• Comments amended to reflect Data Item changes; and updated references</li> </ul>
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Data Item No.	Data Item	Data Element / Attribute *	Description	Data Format	Fixed or Variable	Permissible Values	MRO	GS1 AI	Comments	Status	Details
5.1	Number of Babies Indicator	<u>NUMBER OF BABIES IDENTIFICATION CODE (PATIENT IDENTIFICATION)</u>	An identifier indicating number of babies born and their rank; applicable only to recordable/formal births.	n1/n1	F	E.g. 1/1 = one baby; 1/2 = First of two babies (twin 1); 2/2 = Second of two babies (twin 2); and so on. See <a href="#">Appendix 2</a> for the full specification of this data item.	R	92	Data element delimited by COMMA SEPARATED. Fixed numeric data format, with "/" separator. Whilst human readable form is managed by local solution for wristband design, the label "Rank" <b>MUST</b> be displayed to the left of the Number of Babies Indicator. This data item is REQUIRED; applicable only to recordable/formal births. Refer to <a href="#">ISB 1555 Birth Notifications</a> for further information on recordable / formal births.	Updated	<ul style="list-style-type: none"> <li>Data Item No. was "3.2"</li> <li>Data Element/Attribute was "NUMBER OF BABIES INDICATOR (PATIENT IDENTIFICATION)"</li> <li>Description enhanced</li> <li>Data format was "an3 n/n"</li> <li>Comments amended to reflect Data Item changes; and updated Supporting Information</li> </ul>

Data Item No.	Data Item	Data Element / Attribute *	Description	Data Format	Fixed or Variable	Permissible Values	MRO	GS1 AI	Comments	Status	Details
5.2	Baby of (Last Name)	<u>PERSON FAMILY NAME (MOTHER OF BABY)</u>	That part of a PERSON's name which is used to describe family, clan, tribal group, or marital association, where the PERSON here is the mother of the baby.	max an35	V	E.g. SMITH	R	92	Data element delimited as COMMA SEPARATED. Whilst human readable form is managed by local solution for wristband design, the label "Baby Of" <b>MUST</b> be displayed first, followed by the mother's FAMILY NAME (in capitals). This MAY be followed by the mother's GIVEN NAME (in initial capitals). Person names <b>MUST</b> be displayed as the Family Name first, followed by the Given Name. This data item is <b>REQUIRED</b> .	Updated	<ul style="list-style-type: none"> <li>Data Item No. was "3.3"</li> <li>Data format updated with "max"</li> <li>Comments amended to reflect Data Item changes; and updated Supporting Information</li> </ul>

Data Item No.	Data Item	Data Element / Attribute *	Description	Data Format	Fixed or Variable	Permissible Values	MRO	GS1 AI	Comments	Status	Details
5.3	Baby of (First Name)	<u>PERSON GIVEN NAME (MOTHER OF BABY)</u>	The forename or given name of a PERSON where the PERSON here is the mother of the baby.	max an35	V	E.g. Sandra	O	92	Data element delimited as COMMA SEPARATED. Whilst human readable form is managed by local solution for wristband design, the label "Baby Of" <b>MUST</b> be displayed first, followed by the mother's FAMILY NAME (in capitals). This MAY be followed by the mother's GIVEN NAME (in initial capitals). Person names <b>MUST</b> be displayed as the Family Name first, followed by the Given Name. This data item is OPTIONAL.	Updated	<ul style="list-style-type: none"> <li>Data Item No. was "3.4"</li> <li>Data format updated with "max"</li> <li>Comments amended to reflect Data Item changes; and updated Supporting Information</li> </ul>

## 8 Changes to Sections

A reference point from the previous standard, ISB 1077: AIDC for Patient Identification, to the updated sections of the Requirements Specification for DCB1077: AIDC for Patient Identification.

ISB 1077	Contents	DCB1077
1	Overview	3
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2	Specification	6
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3	Concept of Use	4
3.1	GS1 Global Service Relation Number (GSRN)	4.1
3.2	Encoding the AIDC for Patient Identification Dataset	4.3
4	AIDC for Patient Identification Dataset	7
5	Patient Identity Bands – Example Encoded Data Strings	8
5.1	Standard Identity Band – NHS Number Valid and Verified	8.1 (updated with SRIN and mandatory hospital identifiers)
5.2	Standard Identity Band – NHS Number and Local Hospital Identifiers	8.2 (updated to include GLN)
5.3	Standard Identity Band – NHS Number Not Available / Invalid / Unverified	8.3
5.4	Baby Identity Band – Single Baby	8.4
5.5	Baby Identity Band – More Than One Baby	8.5
6	Permitted Data Carriers	5
7	The Resulting Barcoded Identity Band	9 (updated examples)
8	Supporting Information	10 (renamed to “Helpdesk”)
8.1	Contact Information	10.1
8.2	Useful resources	10.2
9	Known Risks and Issues	Removed
9.1	Summary of Hazards	Removed
9.2	Recommendations and Conclusions	Removed
10	Glossary of Terms	1

## 9 Changes to Implementation Guidance

The Implementation Guidance for DCB1077 AIDC for Patient Identification is a new document, published to support implementation of the updated standard, therefore there are no changes to the document.