Trust Policy

University Hospitals Plymouth NHS Trust

Hospital Identification Standards (GS1) Policy

Issue Date	Review Date	Version
October 2019	October 2024	1.1

Purpose

The purpose of this policy is to describe the governance structure and management of the Trust-wide adoption of GS1 standards introduced by the Trust's Scan4Safety Programme.

Who should read this document?

All staff that provide and support patient care within the Trust.

Key Messages

The Department of Health's eProcurement Strategy in 2014 mandated that all NHS Trusts in England and all their suppliers must adopt GS1 standards. The deadline for full compliance is 2019/20.

In January 2016, University Hospitals Plymouth NHS Trust (UHP) was awarded funding by the Department of Health & Social Care (DHSC) to demonstrate the use of GS1 identification standards for every Patient, Product & Place (physical locations). The standards are now in use for Product Recall, Inventory Management & Purchase to Pay processes within the Trust. This has increased patient safety and operational efficiency through common ways of working and by adopting technology used within the retail sector (barcode scanning).

Clinically, the use of the Patient standard ensures the accuracy of the Positive Patient Identification (PPID) procedure, when recording care events within a patient's electronic record. Use of GS1 barcode technology does not replace the need for patient identity checks.

Why are Scan4Safety standards used at UHP?:

- **Patient** – each patient must be correctly identified prior to clinical care. A barcoded patient identity (ID) band (example right) must be printed and given to all in-patients on admission. Prior to a procedure taking place the patient's ID band is electronically scanned at the Point Of Care (POC) to ensure that the right patient has the right procedure/product given to them. The patient standard ISB 1077 ensures all event data can be recorded against the correct patient details in the relevant IT system.

- **Product** – UHP buys over 200,000 medical & pharmaceutical products from 2500 different suppliers, some having very similar product names and part numbers. GS1 standards identify products with a unique number stored in a barcoded label (example right) and this can be scanned at the POC to ensure the right product is being used and stored against a patient's record. Also expiry date, lot/batch/serial number data can be captured at point of use to alert a clinician whether a product is subject to a recall or out of date.

- **Place** – knowing exactly where patients, products, assets are within the hospital promptly can help improve operational productivity and efficiency and timely delivery of care. All locations (room/discreet space) must be assigned a printed barcoded label (example right), that can be scanned to identify the location for a given event e.g. where a patient has been moved to or where care is being administered, or where goods and services have been delivered.

- **Product recall** – the scanning of a patient ID band and a product/s at the POC into a patient record, enables product safety recalls to be managed even after a patient has received care. This ensures easy identification of affected patients after the receipt of a product recall notice, together with identification and isolation of any faulty products. This saves hours of searching for recalled stock, releases more time back to care and, most importantly, enables recalled items to be removed before they reach a patient.

- **Inventory Management** – the use of unique product barcodes reduces the need for manual processes that could be prone to errors. Within Theatre areas to replenish consumed products in the past staff would attach sticky barcoded labels to paper order forms. These forms sometimes got lost resulting in no order being raised to replace products and no stock for the next patient procedure. This would have had a considerable impact; procedure could have been cancelled and the patient re-booked, increase in procedural time/cost due to same day delivery from a supplier and an increase in pressure of the staff involved.

UHP is widening the use of the core GS1 standards and adopting new ones to uniquely identify Assets, and potentially documents and staff. Interoperability between systems is a challenge within healthcare. GS1 standards enable better sharing between systems and, in the future, could be used within a central Event Data repository (GS1 EPCIS standard).

Core accountabilities	
Owner	Scan4Safety Programme Manager
Review	Scan4Safety Board
Ratification	Deputy Chief Executive & Director of IM&T
Dissemination (Raising Awareness)	All Staff
Compliance	Quality Improvement/Education Group/Scan4Safety Board

Links to other policies and procedures
Identification of Patients Policy Location Management Policy & Procedures (x2) Product Recall Inventory Management Purchase 2 Pay Asset Management – Capital Assets & Labelling

Version History		
1	October2019	
1.1	January 2020	*Minor amendment to 'Key Messages' re: patient safety checks.*

The Trust is committed to creating a fully inclusive and accessible service. Making equality and diversity an integral part of the business will enable us to enhance the services we deliver and better meet the needs of patients and staff. We will treat people with dignity and respect, promote equality and diversity and eliminate all forms of discrimination, regardless of (but not limited to) age, disability, gender reassignment, race, religion or belief, sex, sexual orientation, marriage/civil partnership and pregnancy/maternity.

An electronic version of this document is available on Trust Documents. Larger text, Braille and Audio versions can be made available upon request.

Contents

1 Introduction

Being able to uniquely identify every person (eg. patients and staff), every product, every place and every asset within a busy and complex hospital environment is vital to patient safety and operational efficiency. To accurately record and use this information electronically using ICT systems, there must be clear and unambiguous identification mechanisms in place and easy to use technology at the point of care (POC).

The use of GS1 standards, recognised throughout industry and mandated by the Department of Health and Social Care, provides a robust governance framework, which is detailed in this policy: The standards use globally unique identifiers to identify people, products and places, etc. These unique identifiers link to an electronic registry/computer system where individual attributes (such as a person's name, date of birth, product description, expiry date/lot number, etc) are held.

UHP has many operational systems (100+) that record information on patients, products and locations. The ones that have been developed to use GS1 standards are highlighted below:

Patient	Blood Tracking (Bloodhound), Pathology Samples (iCM), Photography App (SNAP), Electronic Prescribing (SEEeHR/Marand)
Product	Pharmaceutical (Ascribe/EMIS and Powergate), Non-Pharmaceutical (Genesis, GHX Nexus & Oracle)
Place	Estates and Facilities Management (Micad & Planet FM) and Trust Local Place Registry
Asset	Clinical Engineering (eQuip) & Sterilisation and Disinfection Unit (Nexus)

The above list of management systems is not exhaustive in terms of the use of GS1 standards; all replacement/new systems must adopt the standards.

Having a standardised approach to identification within the Trust facilitates the introduction of tracing solutions, using barcodes/RFID. This allows for the easy and correct identification of for example; each implanted product/medical equipment used on a patient.

As mentioned above GS1 standards have been taken forward in:

- **Inventory Management** – POC scanning of barcodes is being rolled out within every Theatre area to capture patient identity, product consumption (including expiry and lot number data) and location information.
- **Purchase 2 Pay** – Purchase orders are sent electronically to suppliers, reducing the amount that are lost through the use of email, post and fax. There is a reduction in the amount of orders that need to be re-sent (some in an emergency, with an increased cost) or followed up. This also reduces the delivery of wrong products as suppliers electronically acknowledge each order.
- **Product Recall –** GS1 information captured through POC scanning within Theatres has significantly reduced the time taken to identify patients affected by a product recall. Where before it may have taken many days/weeks to identify each patient, using the Scan4Safety standards it takes minutes.

Further benefits can be gained by widening the use of GS1 standards:

- **Medical equipment management** – track expensive/critical medical equipment throughout the

Trust to improve product visibility and equipment management and reduce associated costs.

- **Surgical equipment management** – track surgical trays/instruments and loan surgical
  instruments throughout the Trust to improve surgical instrument management and reduce associated costs
- **Estates and Facilities equipment management** – track Estates/Facilities equipment throughout the Trust to improve asset management and reduce associated costs.
- **IT asset management** – it is already possible to track IT assets using Wifi technology as long as the equipment is turned on. If a laptop or desktop PC has been moved and not turned on and a RFID tag was applied the asset can still be tracked to last known location/if it left a building.
- **Staff Identification** – uniquely identifying all staff will make logging in and out of systems easier, when combined with real-time tracing technology (eg. RFID) it can assist with staff scheduling and location for example 'where is my nearest porter/nurse?'.
- **Outpatients** – UHP's patient identification policy applies to all in-patients and specific invasive day case patients. Updating this policy for all patients is under review by the Trust. Once this has been achieved all patient visiting UHP can potentially be identified using the GSRN standard.

This document sets out the Trust's identification policy using GS1 standards, ensuring that all people (patients and potentially staff), products, places & assets, etc can be uniquely identified and tracked/traced throughout the hospital.

2 Purpose

The Trust has adopted GS1 standards for **People (Patient – GSRN), Place (GLN) and Product (GTIN)** as these are mandatory requirements within the DHSC's eProcurement Strategy. The GS1 standard for **Asset (GIAI)** has also been adopted.

A unique identifier shall be assigned to each **Patient, Place, Product & Asset** within the Trust, enabling them to be linked to clinical events and locations, with certainty and in as real-time as possible. The Trust Identification Standards Policy provides assurance on the holistic approach to GS1 standards.

3 Definitions

GS1	GS1 (Global Standards 1) is a not-for-profit, international organisation that develops and maintains standards for supply and demand chains across multiple sectors.
GSRN	A GSRN (Global Service Relation Number) identifies either the recipient (patient) or individual provider of services (nurse, doctor, etc) in the context of a service relationship.
GTIN	A GTIN (Global Trade Item Number) identifies a manufacturer's/supplier's product/service.
GLN	A GLN (Global Location Number) identifies individual locations. These can be physical (a room/discreet space), relating to a function (a department), digital (virtual space) or legal (an organisation).
GIAI	A GIAI (Global Individual Asset identifier) identifies individual fixed assets used within an organisation.

GRAI	A GRAI (Global Returnable Asset Identifier) identifies an asset type along with a serial component, usually used for reusable/returnable containers.
PPID	The clinical process of Positive patient identification is an approach to avoiding patient misidentification for the prevention of medical errors, which include errors in medication, transfusion, and testing, as well as wrong-person procedures, etc.
STP	Sustainability and Transformation Partnership within Devon (http://www.devonstp.org.uk/)
BAU	Business as usual, normal operations.
POC	POC (point of care) is a particular point in the patient's care pathway where a patient receives healthcare products/services eg. carrying out an implant procedure, taking blood sample, administering drugs, etc.
Information asset	A body of information, defined and managed as a single unit so it can be understood, shared, protected and used effectively.
Medical Equipment	Equipment requiring calibration, maintenance, repair, user training and decommissioning: activities usually managed by clinical engineers. Medical equipment is used for the specific purposes of diagnosis and treatment of disease or rehabilitation following disease or injury; it can be used alone or in combination with any accessory, consumable or other piece of medical equipment. Medical equipment excludes implantable, disposable or single-use medical devices.
Surgical instruments	Instruments used in general surgery.
RFID	RFID (Radio-Frequency Identification) using electromagnetic fields to automatically identify and track tags attached to objects. The tags contain electronically-stored information. Passive tags collect energy from nearby RFID readers interrogating radio waves.
Clinical Engineering Dept	Responsible for registering and maintaining all medical devices
Surgical Disinfection Unit	Responsible for registering and maintaining all surgical instruments
IM&T	Responsible for registering and maintaining all computing devices such as computers, mobile devices, servers, etc.
Estates & Facilities	Responsible for registering and maintaining all space records and the maintenance and repair of buildings.

4 Duties

Role of the Scan4Safety Programme/Trust Executive (Board/Groups/Representatives)

The Scan4Safety Programme/Trust Executive are responsible for:

- Championing the use of Scan4Safety standards on a Trust-wide basis.
- Ensuring that Trust-wide adoption and management is robust and in line with this policy.
- Promotion of this policy within the local Sustainability and Transformation Partnership (STP) region and with others where appropriate to ensure local care is joined up wherever possible.

Role of the Line Managers

Line managers are responsible for ensuring that:

- Scan4Safety standards are considered and adopted where practicable within in all project/business as usual (BAU) activity.
- All staff are made aware of this policy and any supporting policies/standard operating procedures.
- They inform the owner of this policy of any non-compliance within their area and their action plan to ensure full compliance.

Role of Specialist staff (Procurement, Finance, Pharmacy, Clinical Engineering, Surgical Disinfection Unit, IM&T and Estates & Facilities, Nurses, Doctors, etc)

Specialist staff are responsible for ensuring that:

- Scan4Safety standards are considered and adopted where practicable within in all project/BAU activity.
- Managers who control/oversee individual patient, product and asset activity are responsible for the creation and maintenance of departmental standard operating procedures in line with Trust protocols and in alignment with this policy.
- This policy is adopted when identifying new or existing items related to patient care and report non-compliance to their immediate line manager..
- They follow any supporting policies and standard operating procedures.

Role of Individual Staff

All staff within the Trust are responsible for ensuring that:

- Scan4Safety standards are considered and adopted where practicable within in all project/BAU activity.
- They are aware of this policy and understanding the reasons for the Scan4Safety standards.
- They follow any supporting policies and procedures and report non-compliance to their immediate line manager.
- Ensuring any barcode/RFID labels/patient identification band used are not damaged in anyway and can be used as intended. If defects have been noticed report these to your line manager/ to the relevant department. In the case of patient ID bands the first course of action should be to replace with a new one.

5 Main Body of Policy

The standards and rules below will be adopted within the hospital on a Trust-wide basis.

Patient & Staff Identification (GSRN)*	The Trust will provide all in-patients with a GS1 barcoded patient identity band on arrival and replace it when needed. Trust staff will scan the barcode on the ID band to identify a patient when using electronic systems. Identification of staff using the GSRN standard is a possibility in the future.
Product Identification (GTIN)*	All suppliers providing goods to the Trust must provide GTINs within their product catalogues and label products accordingly using a GS1 barcode.
Place Identification (GLN)*	All physical locations will be assigned a unique GLN number and a GS1 barcoded label will be affixed within all individual rooms/discreet spaces.
Asset Identification (GIAI)*	All reusable Trust assets will be assigned a GIAI and will have a GS1 barcoded/RFID tag affixed as appropriate.
Barcode tracking	All barcodes and passive RFID tags produced by the Trust and its suppliers will be GS1 compliant (1D linear/2D data-matrix). Suppliers will have complied with the DHSC timelines as a minimum.
RFID tracking	Passive RFID tags will be used to identify all reusable Trust assets. In addition active RFID tags may be considered for high value/high risk/patient care critical items.
Reusing GS1 numbers	Each GS1 number is unique and must only be used to identify a specific item/person and only once and NEVER reused.
New GS1 numbers/system	The Scan4Safety programme team or a nominated department (eg. Estates for GLNs) will put in place systems to control the creation of GS1 keys to ensure that there is no duplication and that they are managed according to the GS1 allocation rules.
Labelling	Each directorate/department will have access to the necessary equipment to produce a GS1 barcode/RFID tag.
Ownership	Once allocated by the Scan4Safety team the ownership and management of a set of numbers will be the responsibility of the directorate/department it is issued to.
Registries/Systems	Central registries/systems for master data should be developed to provide a single source of truth and to share data to other applications as needed eg. Local GLN Place Registry.
Mobile Scanning Devices	The mobile barcode scanning devices used by Trust staff at the POC will be:

	- **Theatres** - Genesis mobile device (Honeywell) - **Wards** - iPod touch with Linea Pro Sledge If other devices need to be adopted, advice should be sought from the Scan4Safety programme team.
Current Systems**	Owners of current systems will proactively explore how Scan4Safety standards could be used to support patient safety and operational efficiency.
System Replacements**	All replacement systems will be required to use the adopted GS1/Scan4Safety standards. Within competitive procurement competitions this will be an essential standard requirement.

* All staff will use these standards as the primary method of identifying people (patients and potentially staff), products places or assets at the POC by using a mobile scanning device, where systems have been enabled. Detailed guidance, governance structure and management of each standard can be found in the associated policy/procedure (see links to other policies on page 2).

**This is dependent on Trust/supplier capability and budget being available to carry out any upgrades. Advice from the Scan4Safety/Procurement team should be sought for new/upgrades to systems.

6 Overall Responsibility for the Document

The implementation of this policy will be the responsibility of the Scan4Safety Programme/Trust Executive and the relevant senior managers within each department adopting the Scan4Safety standards.

7 Consultation and Ratification

The design and process of review and revision of this policy will comply with The Development and Management of Formal Documents.

The review period for this document is set as default of five years from the date it was last ratified, or earlier if developments within or external to the Trust indicate the need for a significant revision to the procedures described.

This document will be reviewed by the Scan4Safety Board and ratified by the Deputy Chief Executive & Director of IM&T.

Non-significant amendments to this document may be made, under delegated authority from the Deputy Chief Executive & Director of IM&T, by the nominated owner. These must be ratified by the Deputy Chief Executive & Director of IM&T.

Significant reviews and revisions to this document will include a consultation with named groups, or grades across the Trust. For non-significant amendments, informal consultation will be restricted to named groups, or grades who are directly affected by the proposed changes.

8 Dissemination and Implementation

Following approval and ratification, this policy will be published in the Trust's formal documents library and all staff will be notified through the Trust's normal notification process, currently the 'Vital Signs' electronic newsletter.

Document control arrangements will be in accordance with The Development and Management of Formal Documents.

The document owner will be responsible for agreeing the training requirements associated with the newly ratified document with the named Deputy Chief Executive & Director of IM&T and for working with the Trust's training function, if required, to arrange for the required training to be delivered.

9 Monitoring Compliance and Effectiveness

Element to be monitored	Ensure that this policy document is followed by all relevant Trust staff.
Lead/s	Dependant on each Scan4Safety standard: Patients and Staff (GSRN) – Quality Improvement Manager & Head of HR Product (GTIN) – Head of Supply Chain & eProcurement & Chief Pharmacy Procurement & IT Manager Place (GLN) – Head of Estates & Facilities Asset (GIAI) – Head Medical Physics (Medical Equipment), – SDU Manager (Surgical instruments), Estates/Facilities - Associate Director of Planning Facilities and Estates, IT and associated Infrastructure – Director of IM&T
Tool	Physical inspections relating to each relevant system and associated barcodes/RFID labels.
Frequency	Auditing will take place as part of daily business and any discrepancies will be reported to the relevant lead for investigation.
Reporting arrangements	Any discrepancies found by auditing will be reported to the Scan4Safety Programme on a monthly basis by the relevant lead/nominated member of their team.
Acting on recommendations and Lead(s)	Scan4Safety Programme team will act on recommendations with individual leads leading any subsequent actions.
Change in practice and lessons to be shared	Required changes to practice will be identified and actioned within 4 weeks. A lead member of the team will be identified to take each change forward where appropriate. Lessons will be shared with all the relevant stakeholders as well as other Scan4Safety Demonstrator Sites & DHSC.

10 References and Associated Documentation

The correct identification GS1 Standards are a requirement in the following frameworks/strategies:

Department of Health's eProcurement strategy (2014)	Mandates the use of GS1 standards in every NHS Acute Trust – to increase efficiencies and significantly improve the quality and safety of care. https://www.gov.uk/government/publications/nhs-e-procurement-strategy
Personalised Health and Care 2020 Framework	Enables England to become a global leader in the provision of digital health and care services that improve patient safety and transparency. https://www.gov.uk/government/publications/personalised-health-and-care-2020
Model Hospital (Carter Report)	Reinforces this and calls for the NHS to undergo a cultural change in order to bring about major efficiencies, or risk further losses. https://www.gov.uk/government/publications/productivity-in-nhs-hospitals
Naylor Report	Recommends a single standard is used to identify NHS buildings across the NHS estate. Scan4Safety drives the adoption of GS1 Location Numbers (GLNs) for all NHS locations. https://www.gov.uk/government/publications/nhs-property-and-estates-naylor-review
WHIN	World Health Innovation Network cites medical error as 3rd leading cause of death (US) and proposes adoption of GS1 standards in healthcare. https://scanhealth.ca/win/
GS1 UK	https://www.gs1uk.org/our-industries/healthcare https://healthcare.gs1uk.org/

Dissemination Plan and Review Checklist | Appendix 1

Dissemination Plan			
Document Title	Hospital Identification Standards (GS1) Policy		
Date Finalised	Oct 2019		
Previous Documents			
Action to retrieve old copies	n/a		
Dissemination Plan			
Recipient(s)	**When**	**How**	**Responsibility**
All Trust staff	ASAP	Vital Signs	Information Governance Team

Review Checklist		
Title	Is the title clear and unambiguous?	Y
	Is it clear whether the document is a policy, procedure, protocol, framework, APN or SOP?	Y
	Does the style & format comply?	Y
Rationale	Are reasons for development of the document stated?	Y
Development Process	Is the method described in brief?	Y
	Are people involved in the development identified?	Y
	Has a reasonable attempt has been made to ensure relevant expertise has been used?	Y
	Is there evidence of consultation with stakeholders and users?	Y
Content	Is the objective of the document clear?	Y
	Is the target population clear and unambiguous?	Y
	Are the intended outcomes described?	Y
	Are the statements clear and unambiguous?	Y
Evidence Base	Is the type of evidence to support the document identified explicitly?	Y
	Are key references cited and in full?	Y
	Are supporting documents referenced?	Y
Approval	Does the document identify which committee/group will review it?	Y
	If appropriate have the joint Human Resources/staff side committee (or equivalent) approved the document?	N/A
	Does the document identify which Executive Director will ratify it?	Y
Dissemination & Implementation	Is there an outline/plan to identify how this will be done?	Y
	Does the plan include the necessary training/support to ensure compliance?	Y
Document Control	Does the document identify where it will be held?	Y
	Have archiving arrangements for superseded documents been addressed?	Y
Monitoring Compliance & Effectiveness	Are there measurable standards or KPIs to support the monitoring of compliance with and effectiveness of the document?	Y
	Is there a plan to review or audit compliance with the document?	Y
Review Date	Is the review date identified?	Y
	Is the frequency of review identified? If so is it acceptable?	Y
Overall Responsibility	Is it clear who will be responsible for co-ordinating the dissemination, implementation and review of the document?	Y

Equalities and Human Rights Impact Assessment | Appendix 2

Core Information	
Date	N/A
Title	N/A
What are the aims, objectives & projected outcomes?	N/A
Scope of the assessment	
Collecting data	
Race	
Religion	
Disability	
Sex	
Gender Identity	
Sexual Orientation	
Age	
Socio-Economic	
Human Rights	
What are the overall trends/patterns in the above data?	
Specific issues and data gaps that may need to be addressed through consultation or further research	

Involving and consulting stakeholders	
Internal involvement and consultation	
External involvement and consultation	
Impact Assessment	
Overall assessment and analysis of the evidence	

Action Plan				
Action	Owner	Risks	Completion Date	Progress update