Document Filename:	**EPS Prescribing Systems Compliance Specification v6.11**		
Programme	**Digitising Community Pharmacy and Medicines**	Project	**Electronic Prescription Service**
Document Reference	**NPFIT-ETP-EDB-0025**		
Project Manager	**Rich Cole**	Status	**Approved**
Owner	**Rob Gooch**	Version	**6.11**
Author	**Rob Gooch**	Version Issue Date	**15/10/2018**

EPS Prescribing Systems Compliance Specification

Document Management

Revision History

Version	Date	Summary of Changes
1.0	07/05/2004	See 'Summary of Changes' within document
2.0	05/10/2005	See 'Summary of Changes' within document
3.0	26/03/2007	See 'Summary of Changes' within document
4.0	07/07/2008	See 'Summary of Changes' within document
5.0	20/03/2012	See 'Summary of Changes' within document
6.0	14/02/2013	See 'Summary of Changes' within document
6.3	02/08/2013	See 'Summary of Changes' within document
6.4	19/11/2014	Updated list of referenced specification documents and relevant guidance documents Corrections to section 6.2.3.2 corrections with respect to use of NHS BSA issues prescribing codes. Corrections to Appendix C the format of spurious codes. Updated EPS Technical Architecture diagram in Section 4.1 to align with Spine 2 Marked requirements currently out of scope for GPSOC-R implementation as 'Out of Scope' Added the term Patient Medical Record (PMR) to the glossary.
6.5	30/06/2015	Section 3.1; remove exclusion of Schedule 2 or 3 controlled drug prescriptions; include exclusions for personal administration and private prescriptions. Section 5.1.1; new local EPS consent flag requirements Section 5.2; the mandatory synchronisation of telephone number demographics. Section 6.1.3; align with changes in regulations where the Repeat Dispensing "authorisation token" is now optional. Section 6.2.4; population of 'responsibleParty' where the prescriber code relates to a prescribing service instead of an individual prescriber; timestamp formatting requirements. Section 6.4; introduction of positive application acknowledgements; changes to the requirements for post-dated prescriptions; changes to what combinations of prescription items can be contained within the same prescription message. Section 6.5; 'reviewDate' changed to optional population Section 6.7; new requirements for managing patient's with more than one nominated dispenser; new requirements for one-off nomination; new requirement to make the nominated dispenser details more visible; new requirement to check existing nominations during the patient registration process. Section 6.9.4; clarification for patient instructions contained within 'additionalInstructions' Section 6.11; requirements for Schedule 2 & 3 controlled drugs Section 6.12; clarification for when prescription tokens should/could be printed; requirements for printing tokens for Schedule 2 & 3 controlled drug

		prescriptions; requirement to consider the location of the default printer when printing prescription tokens. Section 6.17; section removed for 'Personal Administration' Section 6.18; section removed for 'Protocol Supply' Section 6.20; requirements for prescription related reporting Section 6.21; section removed for 'Disaster Recovery' Section 6.22; new requirements for receiving and processing prescription dispensing event notifications from the EPS; new requirements for 'delayed prescribing' prescriptions. Section 6.23; new requirements for email alerts to patients following prescription events Appendix A; deprecated Appendix B; updated with vocabularies not defined in the DMS or the EIS Appendix D; updated for more prescriber types and prescribing locations
6.6	12/08/2015	Section 6.11 updated; change to the how the quantity in words is populated within the 'originalText' element for Schedule 2 or 3 controlled drug prescriptions. Section 6.16.2 updated to clarify that the GP2GP process must continue even if prescription cancellation requests have failed.
6.7	09/12/2015	Section 5.1.1 updated to record a patient's preference to receive electronic prescriptions included associated requirements 5.1.8 and 5.1.9. Section 6.12.5 updated for guidance when printing prescription tokens including associated requirement 6.12.12. Section 6.23 removed Updated Appendix C for podiatrist, chiropodist, physiotherapist, radiographer and optometrist prescriber codes.
6.8	17/03/2016	Requirement 5.1.8 updated with confirmed coding system for patient preferences Section 6.7 Dispensing Contractors and Nomination updated. Reinstated that Defaulting of prescription items to various contractors is otherwise at the discretion of the supplier. Requirement 6.7.5 removed
6.9	03/06/2016	Section 6.3 updated for MIM and DMS compliance Controlled drug requirement changes; 6.11.2, 6.11.3 and 6.11.6 amended; 6.11.8 and 6.11.10 added. Requirement 6.12.12 changed from optional to mandatory.
6.10	28/09/2018	Updated for GP Futures baseline Section 5.2 updated to remove references to NHS Choices as this service is known as NHS.UK Requirement 6.1.1 removed as no longer relevant Requirement 6.4.21 added to clarify process for creating multiple prescriptions for the same patient Requirement 6.5.16 added for formatting floating point quantity values Section 6.6.1 updated to clarify how to generate a Prescription ID where the prescriber's organisation ODS code is less than 6 characters in length

		Requirement 6.7.6 for one-off nomination changed to a “should” requirement Section 6.8 and associated requirements simplified with the depreciation of the non-urgent Parent Prescription interaction Requirement 6.9.10 added for completeness for use of ‘PrescriptionType’ attribute Requirement 6.11.8 amended to clarify positioning of amount in words within additional instructions Requirement 6.11.9 update to clarify how to express numeric quantities in words Section 6.14 simplified as included within NHSBSA documentation Requirement 6.15.3 removed Requirement 6.16.10 added Removal of the following sections; - 6.18 Personal Administration - 6.19 Protocol Supply - 6.21 Disaster Recovery - 6.22 DMS 3.4.00, including ‘delayed prescribing’ references elsewhere in the specification Appendices A, B, C, D and E removed as published within NHSBSA documentation and references to NHSBSA documentation updated.
6.11	15/10/2018	Approved for publication. Release candidate, mark-up removed, pending approval and publication. Requirement 5.1.8 updated to remove options to record patient preferences using the Read v2 or CTV3 coding systems. Requirement 6.1.1 removed to align with Phase 4 operations. **Requirements removed from this specification** Version 6.9 issued on date 3rd June 2016 included a number of requirements which were not supported by a change control note. As a consequence, these requirements were not developed by all suppliers. These requirements, listed below, have been removed from this version and do not need to be delivered by new suppliers to meet the minimum standard for providing the EPS service in primary care. • Requirement 6.7.6; One-off nomination • Requirement 6.11.6; Quantity in words within <originalText> for Schedule 2 or 3 controlled drugs • Requirement 6.11.10; Enablement of use of <originalText> for Schedule 2 or 3 controlled drugs • Requirements 6.21.1 to 6.21.13; DMS v3.4.0 • Requirements 6.21.14 to 6.21.18; Delayed prescribing

Reviewers

This document must be reviewed by the following people:

Reviewer name	Title / Responsibility	Date	Version
Rob Gooch	Senior Technical Architect	15/10/2018	6.11
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Approved by

This document must be approved by the following people:

Name	Title / Responsibility	Date	Version
Rich Cole	Programme Manager	15/10/2018	6.11

Glossary of Terms

Term / Abbreviation	What it stands for
Acute prescription	A “one-off” prescription generated following a consultation between a prescriber and a patient
Advanced Electronic Signature (AES)	An electronic digital signature standard referenced within DH legislation for signing prescriptions
Domain Message Specification (DMS)	The new name for the MIM. Separate versions are now published per domain.
Electronic prescription	The information transmitted electronically, with the inclusion of an Advanced Electronic Signature, from a prescriber to the NCRS Spine to allow dispensing via ETP
Electronic Prescription Service (EPS)	Electronic Prescription Service delivered by the ETP programme
Electronic Transmission of Prescriptions (ETP)	Electronic Transmission of Prescriptions programme, part of the HSCIC.
Prescription token	Paper copy of the electronic prescription used to capture the patient’s declaration of charge paid or exemption.
FP10	The paper form that is used to create a paper–based NHS prescription.
Health & Social Care Information Centre (HSCIC)	The Health and Social Care Information Centre is the national data, information and technology organisation for the health and care systems in England.
Health Level 7 (HL7)	Organisation responsible for the production and communication of healthcare IT communications standards (http://www.hl7.org.uk)
Medication item	Any medication, appliance or device that can be prescribed
Message Implementation Manual (MIM)	Deprecated term - see ‘Domain Message Specification’. A product from the NHS CFH that defines the HL7 messages implemented within the NCRS.
Organisation Data Service (ODS)	The Organisation Data Service (ODS) is provided by the HSCIC. It is responsible for the national policy and standards with regard to organisation and practitioner codes.
NHS Dictionary of Medicines and Devices (dm+d)	Standard for exchange of information on drugs and devices between prescribers, dispensers and reimbursement agencies (http://www.dmd.nhs.uk)
Nomination of dispenser	Process by which a patient specifies a dispenser to manage their prescriptions
Patient Medical Record (PMR)	A term used to describe the module/component of the system that holds patient medical records. Some implementers use the term PMR to describe a single patient medication record. Within the EPS documentation the term relates to the entire collection of patient medical records for the GP practice.
Personal administration	Medication administered directly by a healthcare professional to a patient.
Prescribe	The act of authorising medication items on a prescription.
Repeat prescription	A prescriber-authorised repetition of a prescription
Repeatable prescription	A prescription valid for an authorised number of issues
The System	The system seeking compliance as an ETP prescribing system
Universal Unique Identifier (UUID)	An information technology term for a unique identifier, also known as a Globally Unique Identifier (GUID) more specifically a DCE UUID

Document Control:

The controlled copy of this document is maintained in the NHS Digital corporate network. Any copies of this document 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.

Referenced EPS Requirements Specifications:

CDT D0002 Spine External Interface Specification

NPFIT-ETP-ECAP-0004 NHS Dictionary of Medicines and Devices Compliance Requirement

NPFIT-FNT-TO-IG-0007 National RBAC Database

NPFIT-ETP-EDB-0280 Nomination Requirements for System Suppliers

NPFIT-FNT-TO-DSD-0083 Native use of dm+d Definition

Message Implementation Manual v3.1.07

Message Implementation Manual v4.2.00

NPFIT-ETP-EDB-0027 EPS Prescription Token Specification

NPFIT-ETP-EDB-0064 ETP Message Signing Requirements

NPFIT-FNT-TO-TIN-0453 CC API for ETP suppliers

NPFIT-FNT-TO-TIN-1383 IG v3 Foundation Module

NPFIT-FNT-TO-TIN-1023 PDS Compliance Module V2 - Baseline Index

NHSBSA Overprint Specification for NHS Prescriptions

NHSBSA Requirements and Guidance for Endorsement

Related Guidance Documents:

NPFIT-ETP-EIM-0110 RBAC Implementation Guidance for the EPS R2

NPFIT-ETP-ECAP-0002 Electronic Prescription Service Release 2 Clinical Assurance

dm+d Implementation Guide (Primary Care)

NPFIT-ETP-BUS-0017 EPS R2 Training and Guidance Strategy

NPFIT-ETP-EDB-0104 Digital Signature Toolkit Guidance

NPFIT-ETP-EDB-0301 ETP Web Services Client source code

NPFIT-ETP-EDB-0103 MIM 3.1.07 & 4.2.00 Compatibility Guidance

NPFIT-FNT-TO-DSD-0083 Native use of dm+d Definition

NPFIT-FNT-TO-IG-0019 Digital Signature and Non Repudiation

Contents

1 About this Document

1.1 Purpose

This document details the requirements that must be fulfilled to achieve compliance with Release 2 of the Electronic Prescription Service (EPS). This specification is to support operability with EPS and business processes, which may/will need to be carried out by Pharmacy/Primary Medical Care Contractors when operating the EPS.

Please note that some aspects of the business processes are still subject to further discussion with the relevant professional and/or representative bodies, in particular which of these business processes are optional and which are mandatory. The system will be expected to support the documented business process whether they are optional or mandatory.

Further, in the main this document only details operability with EPS and new business process concerned with EPS which will be tested to assure EPS compliance is achieved, however suppliers may wish to work with their users to consider reconfiguration of existing business process in light of EPS. This will be outside of the scope of EPS compliance and will not be tested.

This document specifies the functionality required to support the EPS for prescribing systems in England.

It is recognised that dispensing doctors, as well as pharmacists authorised to act as supplementary prescribers, may have one combined system. A dispensing system used by a dispensing doctor must adhere to the requirements defined within the "Dispensing Systems Compliance Specification" (ref: NPFIT-ETP-EDB-0024).

1.2 Audience

This document has been written for system suppliers.

1.3 Content

This document comprises the following sections / topics.

- Background
- EPS Objectives
- Compliance Overview
- Spine Core Functionality Compliance
- Electronic Prescription Service Compliance

Within this document, system requirements are explicitly listed within tables. Additional documentation, guidance and illustrations are contained within each document section to support the understanding of the requirements.

Previous versions of this specification document classified each requirement as either "Mandatory" or "Optional". This has been removed as the vast majority of requirements are mandatory.

The following use of terminology denotes the optionality of each requirement;

- Where the term '**must**' is used the requirement is mandatory
- Where the term '**should**' is used the requirement is optional but recommended
- Where the term '**could**' is used the requirement is optional.

2 Background

2.1 Introduction

The Electronic Transmission of Prescriptions (ETP) programme has its origins in a number of Government policy initiatives stemming from ***The NHS Plan*** (7/2000). In particular, ***Pharmacy in the Future*** (9/2000) said:

> *'By 2004 electronic prescriptions will be routine in the community as well as hospitals. Transfer of prescription data between GPs, pharmacies and the Prescription Pricing Authority will be carried out electronically, using the NHS net, in the large majority of cases by 2008, or even earlier.'*

2.2 Pharmacy Policy

In response to the commitments made in **Pharmacy in the Future**, three ETP pilots commenced in mid-2002 and ended in June 2003. The pilots were independently evaluated by the Sowerby Centre for Health Informatics (SCHIN) at the University of Newcastle. The key findings of the evaluation included the following:

- The pilots have shown that ETP is technically viable. By the end of 2002, over 92,000 ETP messages had been transmitted by 51 GP practices and 40 pharmacies;
- Theoretical analysis indicates that ETP has the potential overall to reduce prescription fraud or irregularity, although some types may become more difficult to detect, and some easier to commit;
- There are no major concerns with the security of ETP, although there were minor security issues with the pilot solutions which must be taken into account in implementing and maintaining a secure national system;
- Patients, GPs and pharmacists are on the whole likely to find ETP acceptable, and may come to appreciate the benefits in time;
- When the majority of prescriptions are issued electronically, pharmacies operating prescription collection services expect to make time savings. This may release pharmacy staff to spend more time with customers providing health care advice.

A Vision for Pharmacy in the New NHS, published in June 2003, made clear the Government's intention to include community pharmacy within an integrated NHS. This is an important part of plans for developing the quality and range of community pharmacy services, supporting the development of professional working relationships across all health sectors – hospital, community and other primary care settings.

At the same time the Government also published the document **Framework for a New Community Pharmacy Contract** setting out the range of services that community pharmacists might provide. These were grouped into three categories:

- **Essential** - including dispensing, repeat dispensing and reporting to the National Patient Safety Agency on incidents;
- **Advanced** - including medication use review, and;

- **Enhanced** - including the supply of medicines under minor ailment schemes and patient group directions and supplementary prescribing.

In taking on these extended roles and in working with other healthcare professionals to deliver new integrated services, the community pharmacist needs better access to medical and patient information to carry out these responsibilities. This will help ensure that the services they provide are delivered safely and effectively in a way that meets individual patient needs.

Community pharmacists need access to shared information on interventions and supplies made by other healthcare professionals and the ability to generate information that they need to contribute to the patient record. And systems are needed to ensure that essential information is safely recorded, stored, shared and communicated between all professional staff who provide care and treatment for a patient - in hospitals, GP surgeries and community pharmacies.

Community pharmacists also need access to the Internet and email to improve communications (for example, to be able to receive public health alerts and improve access to information such as the National Electronic Library for Health and to enable them to contribute to the work of agencies such as the National Patient Safety Agency (NPSA) and the Medicines and Healthcare Products Regulatory Agency (MHRA).

2.3 NHS Business Services Authority Prescription Services

The NHS Business Services Authority (NHS BSA) Prescription Services is responsible, amongst other things, for the payment of community dispensers for the drugs, medicines, appliances and services they provide and for the provision of management information relating to the dispensing and supply of drugs.

The **BSA Business Strategy** summarises the challenges currently facing the organisation as follows:

> *'We are entering a crucial period in which the interaction between growth and increasing complexity, on one hand, and our ability to reengineer our processes to increase automation, on the other, must be managed to enable us to contain projected growth within our current processing capacity. We must respond flexibly to these changing demands if we are to maintain the value and the effectiveness of our services to the NHS.'*

The rules governing the reimbursement of prescriptions are complex and this, combined with the significant growth in prescription volumes, means that the BSA needs to increase processing capacity. BSA internal processes have been re-engineered to automate as much as possible. However, the potential to receive prescriptions electronically offers the opportunity to fully automate the data capture process and reduce the dependence on manual processing. The timing of this capacity increase is critical.

2.4 The National Programme for Information Technology in the NHS

Delivering 21st Century IT Support for the NHS (2002) announced the creation of the National Programme for Information Technology in the NHS. This national strategic programme is concerned with major developments in the deployment and use of Information Technology (IT) in the NHS. It aims to connect delivery of the NHS Plan with the capabilities of modern information technologies to:

- support the patient and the delivery of services designed around the patient, quickly, conveniently and seamlessly;
- support staff through effective electronic communications, better learning and knowledge management, cut the time to find essential information (notes, test results) and make specialised expertise more accessible;
- improve management and delivery of services by providing good quality data to support National Service Frameworks, clinical audit, governance and management information.

Delivering 21st Century IT Support for the NHS (2002) said:

> *'It is anticipated that the [ETP] trials will continue to grow and involve a sizeable number of GPs and Pharmacists with a natural migration into rollout. This project will create greater connectivity to NHSnet for Pharmacists allowing the access to the benefits that this service provides. In parallel the Prescription Pricing Authority will have re-engineered their systems to ensure that they process prescriptions electronically. The National Prescriptions Service will be 50% implemented by 2005 and fully implemented by 2006/7.'*

The ETP programme therefore exists to carry forward both the commitments to delivering the Electronic Transmission of Prescriptions and to providing enhanced IT support to community pharmacists to enable them to play an expanded role in primary healthcare.

3 EPS Objectives

The principal objectives of the programme are:

1. To enable the Electronic Prescription Service (EPS) in England between:
    - Prescribers
    - Dispensers
    - The NHS Care Record
    - Reimbursement Agencies (e.g. the Prescription Pricing Division)
2. To facilitate the provision of enhanced patient centred services by community pharmacists which require access to the NHS Care Record
3. To enable the NHSBSA Prescription Services to re-engineer their processes to increase capacity and reduce the unit cost of processing prescriptions.

3.1 EPS Scope

EPS starts at the point where a decision to prescribe has been taken and ends when medication is dispensed and reimbursed (or prescription is cancelled, expires etc.).

EPS covers all primary care prescribing and dispensing (including repeat dispensing) and supply of medicines, drugs, appliances and chemical reagents by NHS dispensing contractors. Secondary care prescriptions issued for dispensing in the community are also in scope.

This specification is applicable to all NHS independent and supplementary prescribers. Refer to the DH publication “Medicine Matters”, dated July 2006, Gateway Ref 6773, for the definition of independent and supplementary prescribers.

The EPS can be used for any patient with a known and valid NHS number.

The following are explicitly **out of scope**.

- Bulk prescriptions
- Prescribing of non dm+d medication items
- Handwritten medication items or amendments on prescription tokens that relate to electronically signed prescriptions
- Automated non-age exemption verification
- Schedule 1 controlled drugs
- Prescribing of extemporaneous preparations not already defined within dm+d as ‘extemp orders’ [1]
- Personal administration
- Private prescriptions

[1] Until such a time when supported within the HL7 messaging with clear implementation guidance available

4 Compliance Overview

4.1 EPS National Model

The high level technical architecture for the EPS is shown in Figure 1 below.

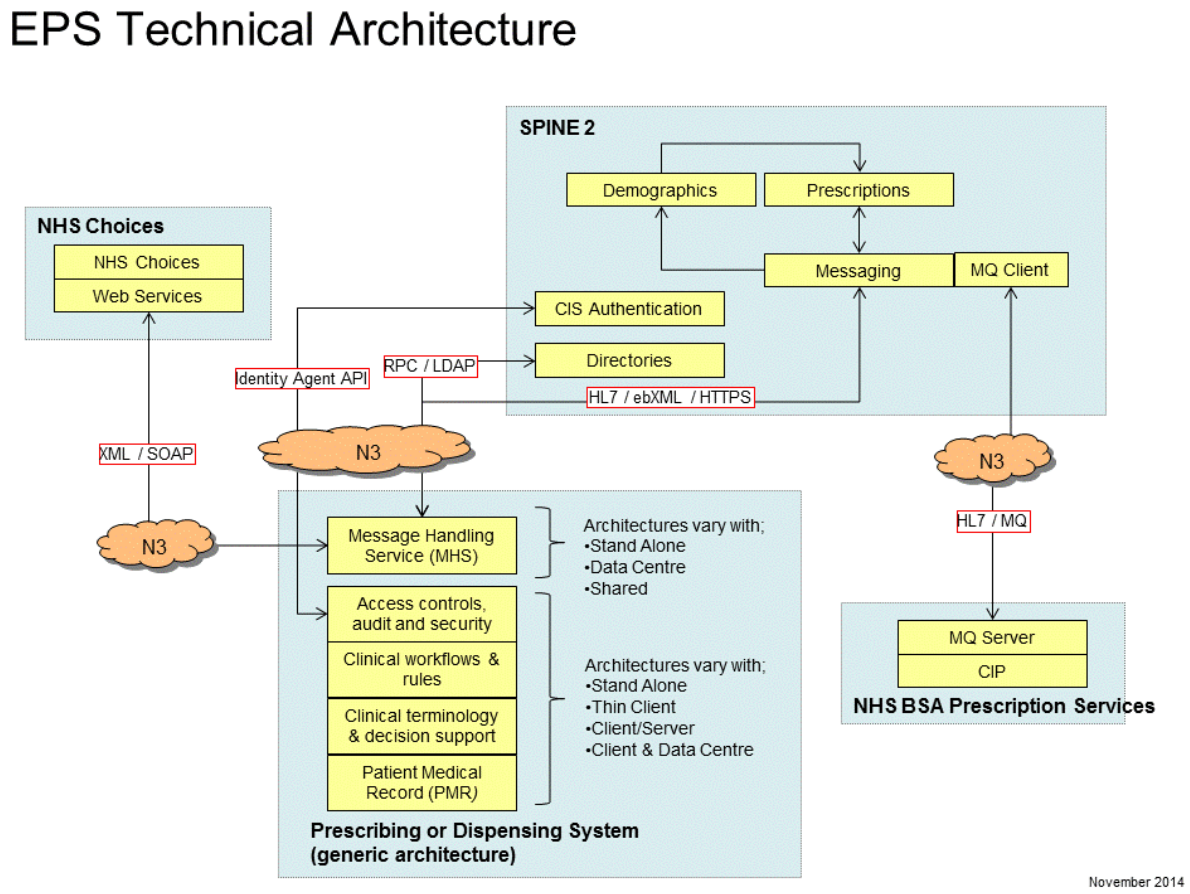

Figure 1 - EPS Technical Architecture

4.1.1 EPS Phased Implementation

The enduring strategy for the implementation of EPS will consist of four main phases, underpinned by two releases of software. In summary these are:

Implementation Phase	EPS Software
1 – Initial Implementers	EPS Release 1
2 – Nationwide Deployment	EPS Release 1
3 – Transition	EPS Release 2
4 – Full EPS	EPS Release 2

The terms “Phase” (1 to 4) and “Release” (1 or 2) will be used within this specification.

5 Spine Core Functionality Compliance

A system wishing to use any of the services provided by the Spine must first be compliant with the core services and all appropriate legislation, regulations, national and international laws related to healthcare systems. The two core Spine services applicable to the EPS are Information Governance (IG) and the Patient Demographics Service (PDS).

5.1 Information Governance

The document "IG v3 Foundation Module" (ref: NPFIT-FNT-TO-TIN-1383) defines the baseline for documents related to the Information Governance (IG).

The following sections provide clarifications to common IG requirements within the context of EPS solutions.

5.1.1 Patient Preference to Receive Electronic Prescriptions

For two specific patient circumstances, the System must be able to record a patient's preference not to receive electronic prescriptions by default. These are for;

- Cross border patients – a patient whose prescriber is in England but their preferred dispenser is in another country (e.g. Scotland, Wales etc.)
- Dispensing patients – for dispensing patients where their dispensing practice has not yet implemented the EPS for dispensing activities

The System must be able to record these two patient preferences using the SNOMED CT coding system.

Note. The Spine Demographics consent flag does not apply to the EPS and can be ignored for EPS processes.

5.1.2 User Authentication

All prescribers and necessary staff who support the prescribing process, who require access to the EPS, must first be registered with the Authority using the RA01 process.

User registration includes the creation of a user profile, stored in the Spine Directory Service (SDS), containing the user's roles and other information that is required for making appropriate application or data access decisions. Registered users are issued with an authentication smart card containing a Content Commitment credential and a secret pass code.

It is recommended that the System provides a means where the user can identify when they are logged on to the Spine. For example, icons within an application status bar.

5.1.3 Role Based Access Control (RBAC)

The HSCIC NHS facing website contains RBAC documentation and guidance and is the primary source for the National RBAC Database (NRD) that defines all the roles, activities, areas of work and baselines for the NHS. This will include the relevant baseline for the EPS. See http://nww.hscic.gov.uk/iim/documents/index_html.

An RBAC baseline is a set of activities defined for a role/area of work combination. These baseline activities are the minimum set of activities that can be undertaken by someone with that role & area of work. In addition to the baseline activities, Sponsors can approve additional optional activities for a user. Baseline activities will be held locally in the local systems managed by system suppliers. Baseline activities will not need to be specified by the sponsor on the RA01 form. The optional, additional activities will always need to be specified by the sponsor and entered into users' role profiles.

RBAC should be linked to application functionality and not directly with messaging interactions with the Spine. Also note that some activities do not directly relate to Spine functionality but are instead associated with existing local system functionality.

Guidance for how to interpret the activities listed within the EPS Baseline is published within the document "RBAC Implementation Guidance for the EPS" (ref: NPFIT-ETP-EIM-0110).

5.1.4 Legitimate Relationships

The legitimate relationship requirements defined within the Spine Core Requirements are not applicable to the EPS service. For EPS, the existence of a legitimate relationship ***does not*** need to be checked by the System.

Ref	Requirement
5.0.1	It is the supplier's responsibility to ensure their system complies with all appropriate legislation, regulations, national and international laws related to healthcare systems. This specification was legally compliant at the time of issue however the overarching requirement to remain within the law has precedence over this document. Where a supplier identifies conflicts between this specification and legal requirements (e.g. due to changes in the law) they are to contact HSCIC to ensure the specification is revised and to seek advice on how they should comply with the change in legislation.
5.1.1	The System must implement smartcard-based Spine user authentication as defined by the NHS Digital Information Governance requirements.
5.1.2	The System should provide a means where the user can identify when they are logged on to the Spine.
5.1.3	The System can allow users to access system functionality outside the EPS or other Spine Services without smartcard authentication. Access to such non-Spine functionality must be governed by existing IG procedures within the System.
5.1.4	The System can access non-Spine web services, such as the NHS.UK web services without Spine user authentication.

<table>
<tr><th>Ref</th><th>Requirement</th></tr>
<tr><td>5.1.5</td><td>The System must adhere to the RBAC requirements defined within “IG Requirements for ESP” or equivalent requirements within NHS Digital contractual frameworks.</td></tr>
<tr><td>5.1.6</td><td>The System must implement the EPS Baseline defined within the National RBAC Database (NRD) including subsequent updates and amendments to the baseline.</td></tr>
<tr><td>5.1.7</td><td>The Spine Demographics consent flag does not apply to the EPS and must be ignored for EPS processes.</td></tr>
<tr><td>5.1.8</td><td>The System must be able to record EPS patient preferences using the SNOMED-CT coding system.

The codes below are correct at the time of publication but may be subject to SNOMED-CT change.
<table>
<tr><th>SNOMED CT</th><th>Description</th></tr>
<tr><td>1034851000000105</td><td>Electronic Prescription Service exception - cross-border patient (record artifact)</td></tr>
<tr><td>1034941000000103</td><td>Electronic Prescription Service exception - dispensing general practice not yet Electronic Prescription Service compliant (record artefact)</td></tr>
</table>
For patients identified with either of these preferences, the System must default their prescriptions to be created as paper FP10 prescriptions.

Note. The Spine Demographics consent flag does not apply to the EPS and can be ignored for EPS processes.</td></tr>
<tr><td>5.1.9</td><td>EPS patient preferences must be included within GP2GP data transfers.</td></tr>
</table>

5.2 Personal Demographic Service

The document “PDS Compliance Module V2 - Baseline Index” (ref: NPFIT-FNT-TO-TIN-1023) defines the baseline for documents related to the Personal Demographic Service (PDS). An updated Demographics baseline is available on request from the NHS Digital Demographics team. They can be contacted via email to “pds-compliance@nhs.net”.

Prescribing systems are required to integrate with the PDS. The PDS baseline references the various documents that define these requirements and provide implementation guidance.

The EPS is available to any patient with a known and valid NHS Number obtained from the PDS and whose record is not flagged within PDS with a confidentiality code of “sensitive” (see Section 6.10.2).

5.2.1 Synchronisation of PDS Attributes

For integration with the EPS, a minimum set of patient demographic attributes must be synchronised between the local system and the Spine PDS. These attributes are as follows;

- Usual name
- Usual address
- Date of birth
- Gender
- Nominated dispenser(s)
- ~~Telephone number(s) including all the 'use' attributes~~

The requirement to synchronise telephone numbers has been removed as data variances within all contact information held within the national Demographics service frequently causes synchronisation issues. This includes email addresses.

The PDS synchronisation requirement with reference SNCCMP-4 states the following;

> “*Differences or duplicates found in comparisons of local and PDS records during synchronisation MUST trigger an immediate manual decision to confirm that the PDS and the local records are for the same person.”*

It will be a common occurrence for a patient to ask a pharmacy organisation to set or change a nomination preference held within PDS. When the patient’s PDS record is next accessed by the prescribing system, this will be seen as a difference, and hence the requirement to alert the user for an immediate manual decision will be triggered.

When the only differences between local and PDS records are nomination preferences, together with an incremented Serial Change Number (SCN), then these changes must be updated in the local record without requiring the user the confirm which is the most appropriate value. Nomination preferences held in PDS always take precedent over nomination preferences recorded in the System.

5.2.2 Patient Nomination of Dispensing Contractor

In addition to the generic PDS requirements applicable for a primary care system, the EPS requires the System to be able to nominate or de-nominate a dispensing contractor for a patient.

A patient can choose up to three nominated dispensers to cover different contractor types;

- Community Pharmacy
- Appliance Contractor
- Dispensing Doctor

The MIM contains two vocabularies for contractor types. The "DispensingSitePreference" vocabulary is used within the Medication Management domain and the "PatientCareProvisionType" vocabulary is used within the PDS domain. The vocabularies are aligned as some previous codes have been deprecated.

Nomination information is stored in the PDS and is updated using the same update semantics as other aspects of the patient's demographic record. The "PatientCareProvisionType" vocabulary must be used when updating a patient's nomination information using PDS messaging. The ODS code of the nominated dispenser is populated within the "HealthCareProvider" entity of the PDS update message.

5.2.3 Identification of a Dispenser ODS Code

To set a patient's nominated dispenser, the ODS code of the dispensing location must be known. Within a prescribing system, it is likely that such dispenser data is either not known, or only local dispensaries are recorded. Details of dispensers operating the EPS nomination service are recorded within an Authorities directory, which is currently the NHS.UK directory (http://www.nhs.uk).

NHS.UK web services will be available to allow an end system to integrate with the NHS.UK directory. Dispensers operating the EPS can be located by various search criteria.

Where the System is not nominating its own site then the NHS.UK web services must be used to validate that the dispensing location exists and is operating an EPS nomination service. If the System permits the manual entry of a ODS code of a dispensing site then the NHS.UK web services must be used to validate this site.

The System must ensure that a chosen ODS code represents a dispensing contractor 'site'. The nomination of dispensing contractor organisations or groups must not be permitted.

If the System maintains a short-list of local or frequency used nominated dispensers to aid the process of setting a nominated dispenser for a patient, then the list must include the five geographically nearest dispensers to the GP practice in addition to other dispensers chosen by the practice for the short-list.

The ODS codes of dispensing doctors will not be available via the NHS.UK web services. A nomination to a dispensing doctor must only be possible from that dispensing doctor's location. Nomination to a dispensing doctor must not be possible remotely. A dispensing doctor must have access to an EPS R2 compliant dispensing doctor system before nominating any patients to the practice.

5.2.4 Identification of the Patient's Nominated Dispensers

The System must display all of the current nominated dispensing organisation details for a patient. This must include the following;

- Contractor type
- Organisation name
- Organisation address
- Organisation postcode.

The dispenser's address displayed must be at least as many address lines as required to distinguish between dispensers of the same chain within the same location. For example, to distinguish between; "*Acme Chemist, 1 High Street, Anytown*" and "*Acme Chemist, 123a Lower High Street, Anytown*".

The patient's PDS record only contains the ODS code for a nominated dispenser therefore Spine SDS must be queried for this additional information. The Table 1 below lists the Spine SDS attributes relevant for the LDAP query.

Data Item	Spine SDS Attribute
Contractor type	organisation.nhsOrgType
Organisation name	organisation.o
Organisation address	organisation.postalAddress
Organisation postcode	organisation.postalCode

Table 1 - Spine SDS Attributes for Nominated Dispenser Organisation Details

The nominated dispenser organisation details should be obtained during the PDS synchronisation activity rather than on-demand during a GP consultation.

The name and address of a patient's nominated dispensers should be easily accessible within the system as practice staff may be asked directly by the patient or patient's carer for this information. Navigating through a series of screens to locate this information may be inefficient.

At the time of prescribing, the NHS.UK web services may be used to validate that the patient's' nominated dispenses is still enabled for nomination. However such functionality must not be system automated but instead must be a user initiated check which is only expected to occur in exceptional circumstances

Refer to the External Interface Specification section 5.1.1 for SDS security requirements and note that an LDAPS (LDAP over TLS) connection using Spine certificate authority credentials is required.

Ref	Requirement
5.2.1	The System must include the functionality to add, update or remove a patient's nominated dispensing contractor information recorded within the Spine PDS. This includes the ability to remove a dispensing doctor nomination. The System must populate PDS with the contractor type and ODS code of that nominated contractors site. To remove a nomination, the PDS object must be removed. Refer to MIM 4.2.00 for how to remove a PDS object using the PDS Update interaction.

Ref	Requirement
5.2.2	The System must use the Authority's chosen services API to locate dispensing sites operating the EPS. This API is currently the NHS.UK web services. Additional requirements are defined within the document "Nomination Requirements Specification for System Suppliers" (NPFIT-ETP-EDB-0280).
5.2.3	The ODS code for a dispensing site, where this is not the code for the local site (where the nomination is taking place) must be validated using the API to ensure the site is valid and operating the EPS Release 2.
5.2.4	If the System permits the manual entry of a ODS code for a dispensing site, then the API must be used to validate that this site is valid and operating the EPS Release 2. **Note**. The functionality to permit a manual entry of a ODS code is optional. If implemented, the use of the API to validate the code is mandatory.
5.2.5	The system must allow the user to set a dispensing doctor nomination for an eligible dispensing patient. A nomination to a dispensing doctor must only be possible from that dispensing doctor's location. Nomination to a dispensing doctor must not be possible remotely. Nomination to a dispensing doctor must only be available the dispensing practice has implemented an EPS-compliant dispensing system. The ODS codes of dispensing doctors will not be available via the NHS.UK web services.
5.2.6	The System must ensure that the chosen ODS code is a dispensing contractor 'site'. The nomination of dispensing contractor organisations or groups must not be permitted.

Ref	Requirement
5.2.7	The System must display the current nominated dispensing organisation details for a patient. This must include the following; • Contractor type (e.g. community pharmacy, appliance contractor or dispensing doctor) • Organisation name • Organisation address • Organisation postcode The patients PDS record only contains the ODS code for a nominated dispenser therefore Spine SDS must be queried for this additional information.
5.2.8	The System should retrieve the patient's nominated dispenser organisation details during the PDS synchronisation activity rather than on-demand during a GP consultation setting.
5.2.9	At the time of prescribing, the API may be used to validate that the patient's nominated dispenser is still enabled for nomination. Such functionality must not be system automated but instead must be a user-initiated check which is only expected to occur in exceptional circumstances.
5.2.10	The System must synchronise at least the following attributes from the PDS with the local demographic record. • Usual name • Usual address • Date of birth • Gender • Nominated dispenser(s) • ~~Telephone number(s) including all the 'use' attributes~~
5.2.11	If the System maintains a short-list of local or frequently used nominated dispensers to aid the process of setting a nominated dispenser for a patient, then the list must include the five geographically nearest dispensers to the GP practice in addition to other dispensers chosen by the practice for the short-list.
5.2.12	The System must not automatically synchronise PDS telecom numbers, including all 'use' attributes, as these are prone to synchronisation failures that then prevent the subsequent use of national services like the EPS until manually resolved.

6 Electronic Prescription Service Compliance

The remainder of this document relates to the specific compliance requirements for prescribing systems that are seeking EPS prescribing system compliance.

6.1 Prescribing Models

The EPS supports three prescribing models in addition to existing paper-based FP10 prescribing. The prescribing models, depicted in Figure 2, are;

- Electronic Acute Prescribing
- Electronic Repeat Prescribing
- Electronic Repeat Dispensing (Repeatable Prescriptions)

The prescriber must still be available to provide a paper FP10 prescription to the patient, if requested by the patient or if desired by the prescriber. When Phase 4 is implemented, electronic prescriptions will be the default and FP10 prescriptions only produced in exemptional circumstances, see Section 6.3.

6.1.1 Electronic Acute Prescribing

An acute prescription is generated following a consultation between a prescriber and a patient and is a “one-off” prescription. An electronic “Parent Prescription” message is created by the System and sent to the EPS sub-system within Spine, to be made available for “pull-down” by a dispenser.

The Spine may respond with a rejection message. Details of the reason for rejection will be contained within the message codes. After successful receipt of the prescription by the Spine it is available to be requested by a dispenser.

6.1.2 Electronic Repeat Prescribing

Repeat prescribing is valid for an authorised number of repeats or for a defined period. Prescription initiation is controlled by the prescriber. Each prescription issue is separately authorised by a prescribing clinician using their local prescribing system supported by any workflows or rules implemented for the repeat prescribing process.

The prescription authorisation results in an electronic prescription being sent to the Spine. The repeat prescription is treated by the EPS sub-system in the same way as an “Acute” prescription.

6.1.3 Electronic Repeat Dispensing

The EPS “repeat dispensing” model was designed to initially work alongside the paper-based repeat dispensing model, thus allowing either model to be adopted by prescribers with minimal change during Phase 3. For the purposes of this specification, it is assumed that the reader has knowledge of the paper-based repeat dispensing model.

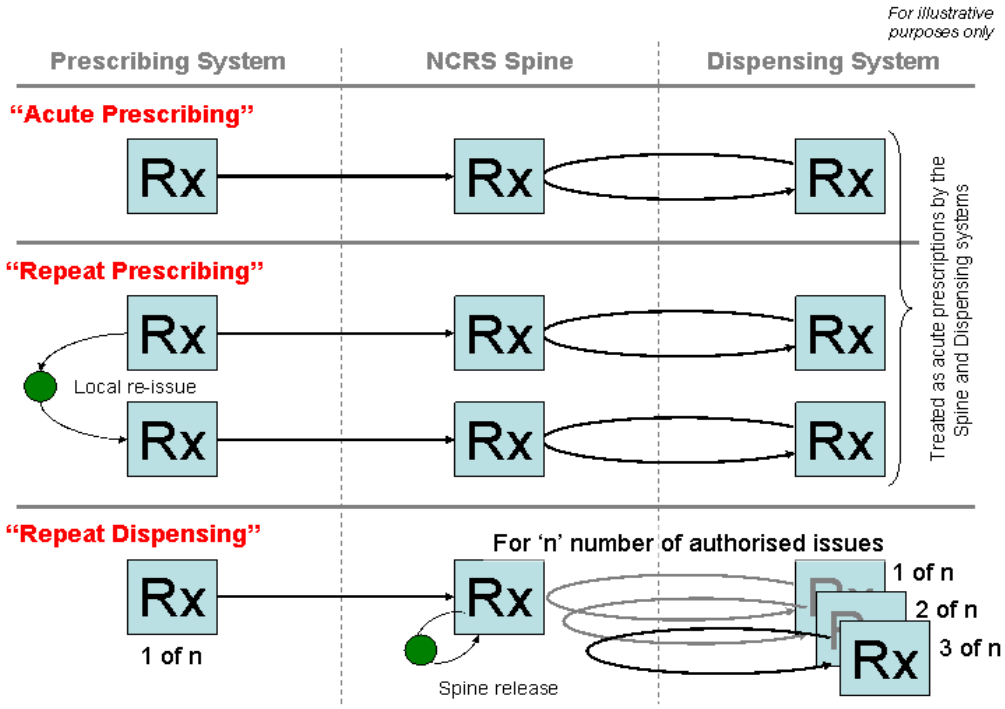

Figure 2 - EPS Prescribing and Dispensing Models

One of the key aspects of repeat dispensing is that the Spine manages the re-issue of subsequent authorised issues of the repeat dispensing prescription. Electronic repeat dispensing prescriptions must be electronic prescriptions, signed with an Advanced Electronic Signature (AES) by the prescriber.

The technical model[2] for repeat dispensing works in the following way;

- The prescriber authorises a prescription with a specified number of issues for which it is valid.
- Each issue is for the same prescribed medication items.
- The prescriber optionally prints a "Repeatable Prescription Authorising Token" to give to the patient. Refer to the document "EPS Prescription Token Specification" (ref. NPFIT-ETP-EDB-0027) for detailed token printing requirements.
- When the Spine EPS component receives the electronic repeatable prescription it makes this available as the 1st issue of the prescription for dispensing.
- The next issue of the prescription is created on the Spine once the previous issue is deemed "complete" (i.e. all medication items either dispensed or not dispensed) so it can be requested and download by the dispenser. The Spine will send nominated repeat dispensing subsequent issues to the nominated dispenser at a time a few days before the next issue is due based on the date of the last dispensing event and the 'DaysSupply' attribute from the prescription.
- Once all authorised issues of the prescription have been dispensed, or if the prescription has expired, the repeatable prescription is completed. For more

[2] The model description for repeat dispensing has been simplified for the purposes of this specification as the details do not impact the technical functionality required by a prescribing system.

medication, the patient must re-visit their GP and obtain a new Repeatable Prescription Authorising Token for another repeat cycle.

- At any time, the prescriber may submit a prescription cancellation request on the prescription or an item within the prescription. This will cancel the repeat dispensing authorisation, or prescribed item, and prevent any further issues of the prescription, or prescribed item, from being dispensed.

During Phase 3 of the EPS implementation strategy, the patient must be using a nominated dispenser. See section 6.3 for more details related to the EPS implementation strategy.

Ref	Requirement
6.1.1	Requirement removed ~~The System must alert the user if a paper-based repeat dispensing prescription is being created when the patient is eligible to receive an electronic repeat dispensing prescription.~~

6.2 Messaging Requirements

The Transaction and Messaging Service (TMS) is a subsystem of the Spine. It provides the interfaces between Spine data and End-Systems and Services external to the Spine. The mechanism to communication with the Spine TMS is defined within the External Interface Specification (ref: CDT D0002).

All system-to-system communication for EPS is implemented using messaging. The standard for messaging is ebXML based on the HL7 Transport Specification - ebXML, Release 1.

Messages received and sent by a prescribing system will be as defined by the Standard Message Set. These are HL7 Version 3 compliant and will be validated using schemas. The only messages that may be utilised for EPS are those specified for EPS and published under the auspices of HL7. Systems will be required to remain current as revisions to the message specification are published.

Health Level 7 (HL7) is an organisation responsible for the production and promotion of the HL7 series of healthcare IT communications standards. In 2002 the NHS Information Standards Board (ISB) approved HL7 Version 3 as the strategic standard for NHS clinical messaging within the National Programme.

HL7 Version 3 ensures consistency in the definition of different information objects and their representation in messages, thus allowing for easier implementation and the definition of clearer conformance requirements. HL7 V3 standards are developed using XML schema to define the information model.

6.2.1 Message Implementation Manual

The relevant versions of the Message Implementation Manual (MIM) for EPS is as follows:

MIM Domain	EPS Release 1	EPS Release 2

Medication Management	MIM 3.1.07	MIM 4.2.00
Infrastructure	MIM 3.1.07	MIM 4.2.00 or newer
PDS	MIM 2.3	MIM 4.2.00 or newer

Suppliers are reminded that a mandatory requirement for all message handling services that implement EPS messages is that all outbound messages (i.e. to the Spine) must be schema validated against the relevant XML schemas published within the MIM. Messages failing schema validation must not be sent to the Spine.

6.2.2 Use of Spine Directory Service for Messaging

The System is required to obtain messaging parameters (i.e. ASIDs and CPA IDs) from the Spine SDS via LDAP. The System is required to obtain these parameters on a regular basis as these values could be subject to change. Suppliers are recommended to check messaging attributes returned from SDS to ensure they are valid, for example to ensure they are non-blank.

6.2.3 Timestamps

Suppliers are reminded of the CFH Standards Consulting Group clarification for timestamp representation, "NPFIT-FNT-TO-SCG-0005 SCG clarification on time zone v1.0". The System must adhere to this guidance for Spine 2 compliance.

6.2.4 Population of CMETs

A CMET is a common component used within HL7 messaging.

From an XML schema perspective, a CMET schema is loose; each must support the lowest common denominator of use. For example, when referring to a patient in care settings outside the EPS, the minimum data requirement is just the patient's NHS Number. Hence within the CMET "R_Patient" the only mandatory attribute is "id" that holds the NHS Number.

Guidance is provided for the following CMETs and common data types within a CMET.

- R_Patient
- R_AgentNPFITPerson
- R_AgentNPFITOrgSDS
- Person Name data type
- Postal Address data type
- Telecommuncations Address data type
- Physical Quantity data type
- Implementation of SET data types

6.2.4.1 R_Patient

The "R_Patient" CMET contains data related to a single patient.

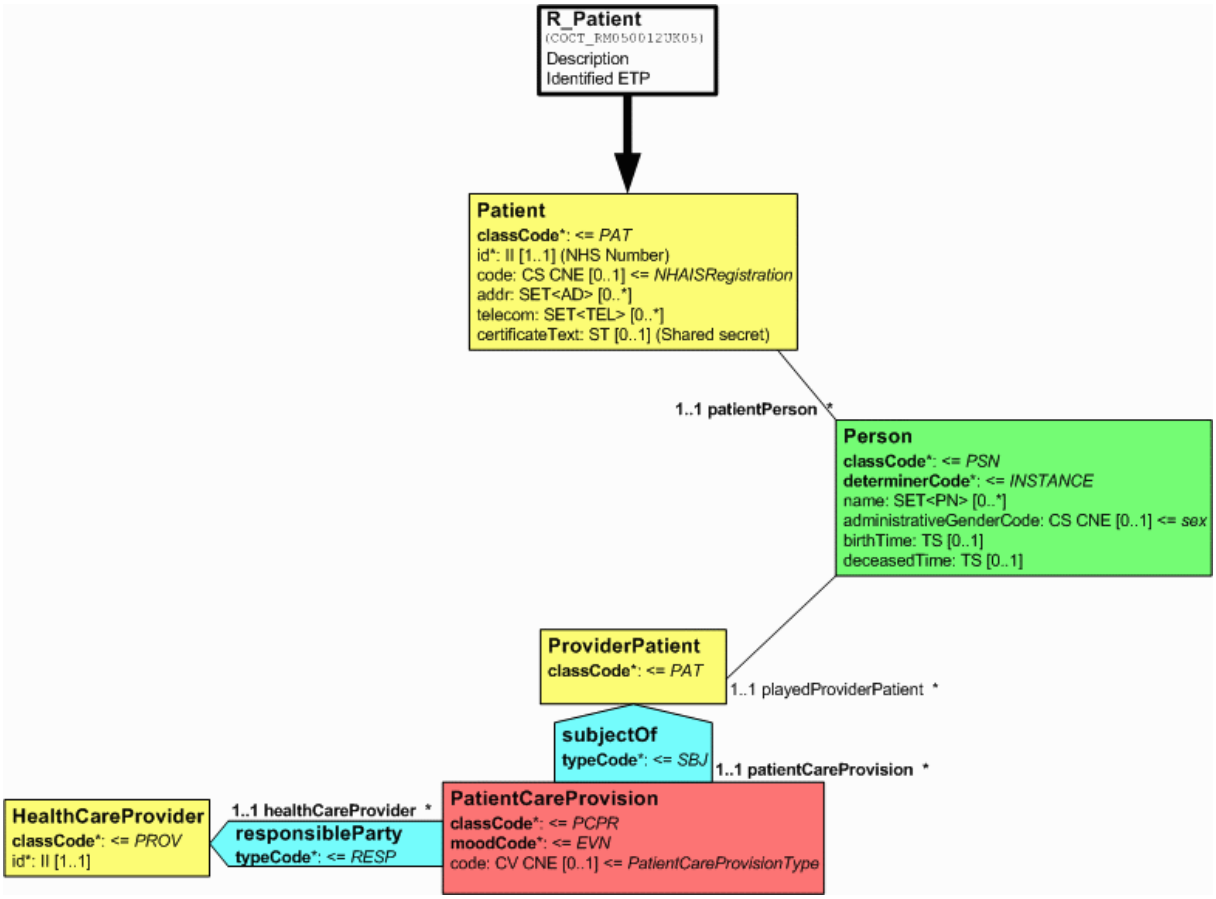

Figure 3 - R_Patient CMET

Additional EPS requirements beyond those defined in the DMS are as follows;

The required fields in addition to mandatory fields are;

- patient.addr
- person.name
- person.administrativeGenderCode
- person.birthTime

The 'person.birthTime' must be in the format YYYYMMDD. There may be scenarios when a patient's date of birth is recorded within the Spine PDS as an incomplete date, for example, as a year and a month (YYYYMM), or as just a year (YYYY). The prescriber must be notified when an incomplete date has been returned by Spine PDS so that an actual date of birth can be updated on PDS and used on a prescription. If an actual or estimated date or birth cannot be determined by the prescriber then the 1st day and/or the 1st month of the year must be used when populating the "R_Patient" CMET.

The 'HealthCareProvider.id' must be the ODS code for the patient's registered GP practice. In the scenario where a patient is not registered with a GP practice, or when he patient's registration details are not known, the 'id' element can be populated with nullFlavor, i.e. <id nullFlavor="NA"/>.

6.2.4.2 R_AgentNPFITPerson

The “R_AgentNPFITPerson” CMET is used when recording details of Spine user who is acting as the author or responsible party. This CMET supports two variants of such details; PersonSDS / OrganisationSDS and Person / Organisation. The SDS variants only capture the ID of the person or organisation. The details could be queried from the SDS. However, for legal reasons, additional information such as name and address must be contained within a prescription.

Therefore **in all cases**, the non-SDS variant within this CMET must be used (e.g. “Organization” and “Person”, and not “OrganizationSDS” or “PersonSDS”).

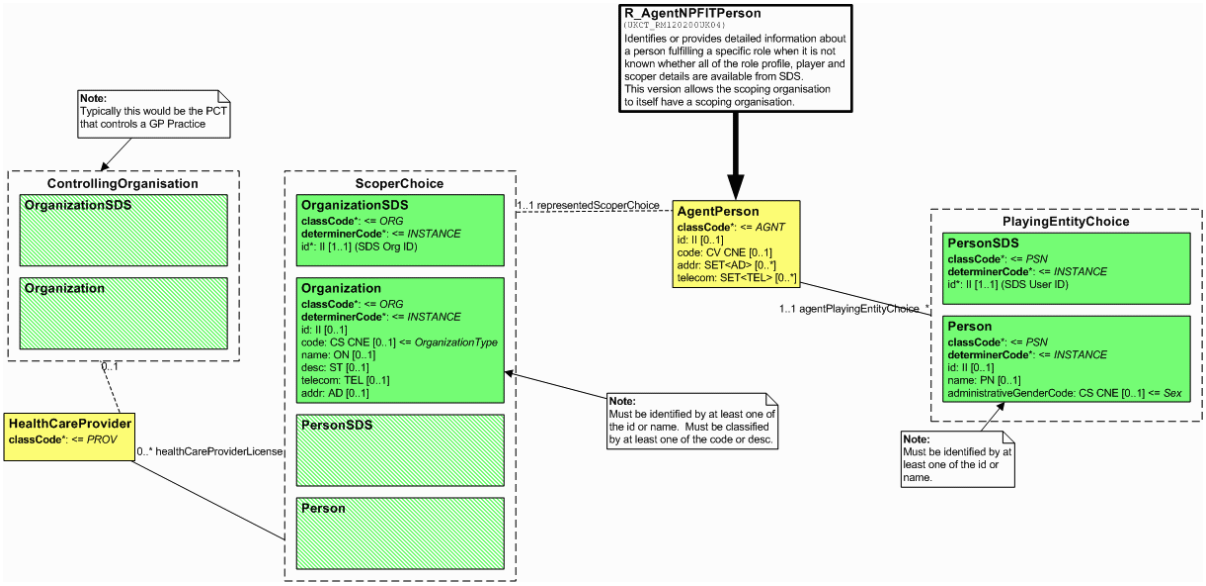

Figure 4 – R_AgentNPFITPerson CMET

The population of this CMET is defined within the message specification within the tabular views. Business rules for data population are defined in this specification to account for different prescribing processes.

Population of “author”

The Author CMET must contain the personal and organisational details of the user who has electronically signed the prescription.

author **Required Fields**	**author** **Population Rules**
AgentPerson.id	The prescriber’s SDS Role Profile ID.
AgentPerson.code	The prescriber’s SDS job role code (returned in the SAML assertion following successful end-user authentication) for example “R8003”.
AgentPerson.telecom	A valid telephone number for the prescriber. Where a specific telephone number is not available use the same telephone number as provided within the ‘AgentPerson.Organization’ entity.

author Required Fields	author Population Rules
AgentPerson.Person.name	The name of the prescriber identified by the 'AgentPerson.Person.id' field.
AgentPerson.Person.id	The professional code of the prescriber. This will be the GMC for GPs, the NMC for nurse prescribers or the GPhC for pharmacist prescribers. The OID must be 1.2.826.0.1285.0.2.1.54
AgentPerson.Organization.id	The ODS code for the prescriber's organisation. The OID must be 1.2.826.0.1285.0.1.10
AgentPerson.Organization. code	Vocabulary for this attribute is no longer updated. Use code "999" / "Not Specified" in all cases. The OID must be 2.16.840.1.113883.2.1.3.2.4.17.94
AgentPerson.Organization. name	The name of the organisation.
AgentPerson.Organization. telecom	A valid telephone number for the organisation.
AgentPerson.Organization. addr	The postal address of the organisation.
AgentPerson.Organization. healthCareProviderLicense. Organization.id	The ODS code for the commissioning organisation for the prescriber's organisation. The OID must be 1.2.826.0.1285.0.1.10. In most cases this with be the ODS code of the Clinical Commissioning Group (CCG).
AgentPerson.Organization. healthCareProviderLicense. Organization.name	The name of the commissioning organisation for the prescriber's organisation. In most cases this with be the name of the Clinical Commissioning Group (CCG).

Population of "responsibleParty"

The population of the 'responsibleParty' entity is equivalant to the details that would be printed at the bottom of an FP10.

<table>
<tr><th>responsibleParty
Required Fields</th><th>responsibleParty
Population Rules</th></tr>
<tr><td>AgentPerson.id</td><td>Where the “AgentPerson.Person.id” prescribing code relates to a clinician then use their SDS Role Profile ID.
Where the “AgentPerson.Person.id” prescribing code relates to a service this field must be omitted as smartcards are not issued to services.</td></tr>
<tr><td>AgentPerson.code</td><td>Where the “AgentPerson.Person.id” prescribing code relates to a clinician then use their the SDS job role code (returned in the SAML assertion following successful end-user authentication) for example “R8003”.
Where the “AgentPerson.Person.id” prescribing code relates to a service this field must be omitted as smartcards are not issued to services.</td></tr>
<tr><td>AgentPerson.telecom</td><td>A valid telephone number for the prescribing clinician or cost centre. Where a specific telephone number is not available use the same telephone number as provided within the ‘AgentPerson.Organization’ entity.</td></tr>
<tr><td>AgentPerson.Person.name</td><td>The name of the prescribing/cost centre clinician or organisation as identified by the ‘AgentPerson.Person.id’ field.</td></tr>
<tr><td>AgentPerson.Person.id</td><td>The prescribing code issued by the NHSBSA.
The system must be capable of populating all medical and non-medical prescriber codes required by the NHSBSA in the correct format[3]
The OID must be 1.2.826.0.1285.0.2.1.54
Examples include;
<table>
<tr><th>Prescriber</th><th>Code</th></tr>
<tr><td>Medic (e.g. any type of GP)</td><td>Doctor’s Index Number (DIN) or spurious code[4]</td></tr>
<tr><td>Nurse</td><td>NMC</td></tr>
<tr><td>Pharmacist</td><td>GPhC</td></tr>
</table>
</td></tr>
</table>

[3] See NHSBSA website and FP10 Overprint Specification for further details on the format of Prescriber codes and Appendix D.

[4] See https://www.nhsbsa.nhs.uk/ccgs-area-teams-and-other-providers/organisation-and-prescriber-changes/ccgs for the definition of a ‘spurious code’.

responsibleParty Required Fields	responsibleParty Population Rules
AgentPerson.Organization.id	The ODS code for the clinically responsible organisation. The OID must be 1.2.826.0.1285.0.1.10
AgentPerson.Organization.code	Vocabulary for this attribute is no longer updated. Use code “999” / “Not Specified” in all cases. The OID must be 2.16.840.1.113883.2.1.3.2.4.17.94
AgentPerson.Organization.name	The name of the organisation.
AgentPerson.Organization.telecom	A valid telephone number for the organisation.
AgentPerson.Organization.addr	The postal address of the organisation.
AgentPerson.Organization.healthCareProviderLicense.Organization.id	The ODS code for the commissioning organisation for the clinically responsible organisation. The OID must be 1.2.826.0.1285.0.1.10. In most cases this with be the ODS code of the Clinical Commissioning Group (CCG).
AgentPerson.Organization.healthCareProviderLicense.Organization.name	The name of the commissioning organisation for the clinically responsible organisation. In most cases this with be the name of the Clinical Commissioning Group (CCG).

6.2.4.3 R_AgentNPFITOrgSDS

This CMET is used to capture the patient’s nominated dispensing site.

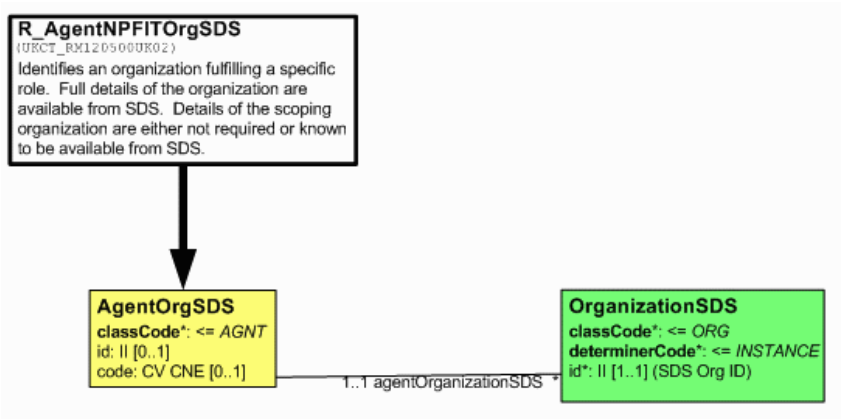

Figure 5 - R_AgentNPFITOrgSDS CMET

The only required attribute is the OrganizationSDS 'id' containing the ODS code of the dispensing site and the OID 1.2.826.0.1285.0.1.10

6.2.4.4 Person Name (PN)

Within HL7 a name can be represented by either a structured or unstructured name format. Within the EPS domain, there are two implementations of this data type; for a patient name and for a registered Spine user name.

Patient Name

Patient names must always be formatted using the "Person name structured" flavour. This CMET supports multiple names however for the EPS only a single name must be populated (the patient name printed on the prescription token). The HL7 elements of "use" and "valid time" can be ignored.

Registered Spine User Name

The name of the registered Spine user may be formatted using either the "Person name structured" or "Person name unstructured" flavours. Two flavours are required because the Spine SDS, the repository for registered users, only mandates "full name" and "family name" attributes. Thus if the other optional attributes of a name are not populated, a structured name cannot be formed. Where possible, structured names must be used when data is available from Spine SDS and unstructured names used only when just the "full name" and "family name" exist. The HL7 elements of "use" and "valid time" can be ignored.

6.2.4.5 Postal Address (AD)

All postal addresses must use the "Unstructured address plus postal code" flavour. The minimum dataset as defined by the Spine PDS is the population of address lines 1, 2 and 4, therefore some elements of the flavour may be blank, but not omitted.

Multiple addresses are supported by the HL7 messages however for the EPS, only a single address is required (the address printed on the prescription token).

For all addresses, if additional HL7 elements such as "use" and "valid time" are included, these can be ignored.

6.2.4.6 Telecommunication Address (TEL)

All flavours of the "Telecommunication address" data type must be supported for the EPS so that the user has access to all known means to contact the patient or clinician. Suppliers can choose how they present telecommunications numbers when the "use" attribute and/or "useable period" elements are populated.

Note. A blank telephone number, e.g. value="tel:" is not HL7 schema valid.

Note. A telephone number **must not** contain whitespace or special characters such as "#".

6.2.4.7 Physical Quantity (PQ)

When representing the quantity of a medication item, the Physical Quantity data type must be formatted using the "Quantity in Alternative Units" flavour when using a dm+d unit of measure. See Section 6.5 for more information.

6.2.4.8 Implementation of SET data types

The CMETs “R_Patient” and “R_AgentNPFITPerson” convey personal demographic information relating to the patient and clinicians for the prescription. Within these CMET structures some data attributes can be recorded in “sets”, thus recording multiple values for the same data item. This specifically relates to the following demographic data;

- Name e.g. “name (SET<PN>)”
- Address e.g. “addr (SET<AD>)”
- Telecommunication address e.g. “telecom (SET<TEL>)”

The legal requirement for such patient demographics on a prescription is a single patient name and address, therefore the System must populate the HL7 message with a single patient name and a single patient address. These details must be the same as that printed on the FP10/prescription token.

The Spine PDS supports multiple patient names and addresses. Refer to PDS guidance documentation for handling multiple patient demographic data, but note that in most circumstances, the patient name marked within PDS as the “Usual (current) name” and the patient address marked as the “Usual address” will be relevant for use when creating a prescription.

All available, and valid for the current date/time, patient telecommunication addresses recorded within the Spine PDS must be recorded within the prescription.

Ref	Requirement
6.2.1	The System must implement the interactions identified for “GP Systems” within the MIM 3.1.07 and MIM 4.2.00
6.2.2	The System must populate all mandatory fields as defined by the XML schema and all required fields as defined within the MIM tabular views.
6.2.3	The System must validate outbound messages against the relevant XML/HL7 schemas published within the MIM. Messages failing schema validation must not be sent to the Spine. **Note**. The ‘tightened’ schemas available for use during testing must not be used within the live environment.
6.2.4	The System should validate inbound messages against the relevant XML/HL7 schemas. If a schema invalid message is received an incident report should be raised with the National Help Desk.

Ref	Requirement
6.2.5	The System must receive and handle HTTP transport layer acknowledgements sent from the Spine TMS together with the relevant interactions from the 'TMS Infrastructure' specification within the DMS.
6.2.6	The System must obtain messaging parameters (i.e. ASIDs and CPA IDs) from the Spine SDS via LDAP. The System must obtain these parameters on a regular basis as these values could be subject to change.
6.2.7	The non-SDS variants ("Person" and "Organisation") of the HL7 CMET "R_AgentNPFITPerson" must be used when populating author and responsible party details.
6.2.8	The "R_AgentNPFITPerson" CMET must be populated as per the business rules within this specification when defining the 'author' of a prescription.
6.2.9	The "R_AgentNPFITPerson" CMET must be populated as per the business rules within this specification when defining the 'responsibleParty' of a prescription.
6.2.10	Requirement removed
6.2.11	Requirement removed
6.2.12	Requirement removed
6.2.13	Within "R_Patient", the patient name must be formatted using the "Person name structured" HL7 flavour.
6.2.14	The System must populate the "R_Patient" CMET with a single patient name and a single patient address. The patient name and address must be the same as that printed on the FP10/prescription token.
6.2.15	The System must populate the "R_Patient" CMET with all available telecommunication addresses recorded within Spine PDS that are valid for the current date/time.

Ref	Requirement
6.2.16	The prescriber must be notified when an incomplete date of birth exists, where a day or month of birth is not recorded on the Spine PDS, so that an actual date of birth can be updated on PDS and used on the prescription. If an actual date of birth is not known the prescriber should use an estimated date of birth on the prescription. Contrary to the DMS for the population of the "R_Patient" CMET, the date of birth must always be recorded in the format YYYYMMDD therefore if an actual or estimated date of birth cannot be determined, the system must notify the user that the 1st day and/or the 1st month of the year will be used.
6.2.17	Within "R_AgentNPFITPerson", the name of a registered Spine user must be formatted using either the "Person name structured" or "Person name unstructured" HL7 flavours.
6.2.18	The Postal Address (AD) data type must be formatted using the "Unstructured address plus postal code" HL7 flavour.
6.2.19	All defined HL7 flavours for a Telecommunication Address (TEL) data type must be supported.
6.2.20	The Physical Quantity (PQ) data type must be formatted using the "Quantity in Alternative Units" HL7 flavour when representing the quantity of a medication item with a dm+d unit of measure.
6.2.21	Requirement removed.
6.2.22	Until further notice, where an appropriate organisation type code for the prescribing organisation does not exist in the DMS "OrganizationType" vocabulary, use the code "999" = "Not Specified".
6.2.23	Within "R_Patient", the "id" element within the "healthcareprovider" element must be populated either by the ODS code of the patient's registered practice, or by "nullFlavor" to denote the patient is not registered with a GP practice or when the patient's registration details are not known, i.e. <id nullFlavor="NA"/>.
6.2.24	The System must format timestamp data as per the "NPFIT-FNT-TO-SCG-0005 SCG clarification on time zone" guidance paper.
6.2.25	The System must not truncate or trim any codes used within the "R_Patient" or "R_AgentNPFITPerson" CMETs.

6.3 Requirements to support the EPS R1 / R2 transition strategy

Section 4.1.1 of this specification outlined the implementation strategy for the EPS. Specific technical requirements apply for the implementation of the Phase 3 "Transition" and Phase 4 "Full EPS" periods. These requirements relate to the use of MIM versions and the means by which a prescription can be authorised (signed using an Electronic Signature) by the prescriber.

The following table summarises the requirements that includes, for completeness, the previous requirements for EPS Release 1.

There may be the need, in extreme case, to temporarily disable the EPS within a practice, most likely as a result of implementation issues. Under such circumstances all prescriptions must be FP10 paper prescriptions with no printed barcode and no parallel HL7 prescription message. Suppliers should therefore support either a fourth mode of operation of "EPS Disabled" or an equivalent mechanism to temporarily disable the EPS.

Implementation Phase	EPS Software	Non-Nominated Prescriptions		Nominated Prescriptions	
		HL7	Prescription Authorisation	HL7	Prescription Authorisation
Phase 1 Initial Implementers	*Release 1*	*MIM 3.1.07*	*Hand Signed*	*Not Implemented*	
Phase 2 Deployed	*Release 1*	*MIM 3.1.07*	*Hand Signed*	*Not Implemented*	
Phase 3 Deployed Disabled	Release 2	MIM 3.1.07	Hand Signed	Not implemented but can manage patient nominations	
Phase 3 Enabled	Release 2	MIM 3.1.07	Hand Signed	MIM 4.2.00	Electronically Signed
Phase 4 Enabled	Release 2	MIM 4.2.00	Electronically Signed	MIM 4.2.00	Electronically Signed
EPS Disabled	N/A	N/A	Hand Signed FP10	N/A	

The ability for the System to operate in each of the Phase 3 and Phase 4 modes must be available from the outset. The different modes of operation must be configurable on a site-by-site basis (where a site is defined as locations that operate under the same organisational ODS code) to align with the EPS implementation strategy.

Functionality related to electronic repeat dispensing, cancellation and 18-character prescription IDs must only be available to prescriptions signed with an Advanced Electronic Signature.

Any site that is operating EPS Release 2 software, in any of the Phase 3 or 4 modes, must implement the functionality to manage patient nominations.

Ref	Requirement
6.3.1	The System must be able to operate in three modes aligned with the implementation phases of; 1. Phase 3 Deployed Disabled 2. Phase 3 Enabled 3. Phase 4 Enabled During Phase 3, all hand-signed prescriptions must be created as MIM 3.1.07 messages, with all electronically signed prescriptions as MIM 4.2.00 messages
6.3.2	The System must have the ability to switch between the three modes of operation which must be configurable on a site-by-site basis.
6.3.3	Functionality related to electronic repeat dispensing, cancellation and 18-character prescription IDs must only be available to electronically signed prescriptions.
6.3.4	During all implementation phases, a fully paper-based hand-signed FP10 prescription must always be possible to be generated when required, in line with legislation. In such circumstances no barcode is printed on the FP10 and no EPS messaging takes place.
6.3.5	The System should support either a fourth mode of operation, "EPS Disabled", or an equivalent mechanism to temporarily disable the EPS if requested, in extreme cases, by the Authority, resulting in all prescriptions as FP10 paper prescriptions with no printed barcode and no parallel HL7 prescription message.

6.4 Electronic Prescription Generation

An electronic prescription is implemented using the HL7 message "Parent Prescription" defined in the MIM.

This section details some of the specific requirements relating to the generation of the HL7 "Parent Prescription" message. Refer to the MIM for the complete message definition.

The purpose of the "Parent Prescription" message is to convey the necessary patient and clinical information between the prescriber, the Spine, the dispenser and the NHS BSA.

6.4.1 Post-Dated Prescriptions

If a prescription is to be post-dated it must be submitted to the EPS as soon as it is electronically signed.

The EPS will only allow such prescriptions to be downloaded by dispensers after the authorised start date and will handle any changes to patient nomination preferences while queued within the EPS.

The “Author.time” attribute must be set to the date/time that the prescription was electronically signed.

The “ParentPrescription.effectiveTime” attribute must be set to the future start date for the prescription (often known as the appropriate date).

6.4.2 Restrictions for Number and Type of Medication Item on a Single Prescription

6.4.2.1 Medication Number Restrictions

The electronic prescription must detail all prescribed medication items that are to be dispensed using the EPS. Unlike a paper prescription where physical paper size limitations mean that the maximum number of prescribed items is limited to the size of the FP10 stationery (typically 4 items per prescription), an electronic prescription can, in theory, contain an infinite number of medication items.

For EPS Release 1, the maximum number of items on a single electronic prescription has been limited to 4. This is to align with paper prescribing as these models will be operating in parallel.

For EPS Release 2, the maximum number of items on a single electronic prescription will remain limited to 4 but this position may be revisited in the future for electronically signed prescriptions.

An electronic prescription must contain at least one medication item.

The System must allow the user to select more than the number of medication items permitted on an EPS prescription for a single patient and generate multiple separate EPS prescriptions in a single user interaction, including signing all prescriptions in a single user action.

6.4.2.2 Medication Treatment Type Restrictions

Acute and repeat prescribing medication items **must not** be contained on the same prescription as repeat dispensing items.

A prescription **may** contain both acute and repeat prescribing medication items, the ‘PrescriptionTreatmentType’ entity should be populated with code 0001 “Acute Prescribing” and populate acute items without a ‘repeatNumber’ and repeat items with a ‘repeatNumber’ as per this specification.

6.4.3 Splitting Items across Electronic and FP10 Prescriptions

Not all medication can be prescribed via the EPS, for example, where a mapping from a proprietary drug database to the dm+d does not exist. In such cases the default position is to prescribe medication not prescribable via the EPS on a separate FP10, thus splitting the medication across electronic and FP10 prescriptions.

It is permissible in this scenario, at the choice of either the prescriber or patient, to prescribe all medication items on an FP10 prescription.

Out of scope types of medication item for the EPS are listed in Section 3.1.

6.4.4 Positive MCCI Application Acknowledgements

The EPS supports a positive MCCI Application Acknowledgement for the "Parent Prescription" interactions. Prescribing system end-points should be configured to be sent the positive acknowledgement. Refer to section 6.15 for prescription rejection requirements.

Ref	Requirement
6.4.1	The System must ensure that all prescription messages (i.e. electronically signed prescriptions and non-electronically signed prescription messages) are submitted to the EPS.
6.4.2	The System must ensure that all electronic prescriptions prescribe one or more medication items.
6.4.3	The System must allow the creation of an electronic prescription with a limit to the number of medication items listed on a prescription to 4.
6.4.4	The System must ensure that any required prescribing endorsements are included within the electronic prescription message. Endorsement codes are listed within the NHSBSA document "Requirements and Guidance for Endorsement".
6.4.5	Requirement removed – related to post-dated prescriptions
6.4.6	Requirement removed – related to when medication items should be prescribed on different prescriptions
6.4.7	Out of Scope – related to private prescriptions
6.4.8	Out of Scope – related to private prescriptions
6.4.9	Out of Scope – related to private prescriptions
6.4.10	Out of Scope – related to private prescriptions
6.4.11	Out of Scope – related to private prescriptions
6.4.12	Out of Scope – related to private prescriptions
6.4.13	Out of Scope – related to private prescriptions

Ref	Requirement
6.4.14	Not all medication can be prescribed via the EPS, for example, where a mapping from a proprietary drug database to the dm+d does not exist. In such cases the default position is to prescribe medication not prescribable via the EPS on a separate FP10, thus splitting the medication across electronic and FP10 prescriptions. It is permissible in this scenario, at the choice of either the prescriber or patient, to prescribe all medication items on an FP10 prescription.
6.4.15	The system should be configured to receive a positive MCCI Application Acknowledgement for 'ParentPrescription' interactions.
6.4.16	If a prescription is to be post-dated, then the "Author.time" attribute must be set to the date/time that the prescription was electronically signed.
6.4.17	If a prescription is to be post-dated, then the "ParentPrescription.effectiveTime" attribute must be set to the future start date for the prescription (often known as the appropriate date). It is this date from which the expiry period starts from.
6.4.18	If a prescription is to be post-dated it must be submitted to the EPS as soon as it is electronically signed.
6.4.19	The System must ensure that acute and repeat prescribing medication items are not contained on the same prescription as repeat dispensing items.
6.4.20	The System must ensure that medication items that have different legal expiry periods e.g. Schedule 2/3/4 controlled drugs compared with Schedule 5 controlled drugs and non-controlled drugs, are able to be prescribed on the same prescription.
6.4.21	The System must allow the user to select more than the number of medication items permitted on an EPS prescription for a single patient and generate multiple separate EPS prescriptions in a single user interaction, including signing all prescriptions in a single user action.

6.5 Medication Management

The ETP programme is dependent on a standard for exchange of information on drugs and devices between prescribers, dispensers and reimbursement agencies.

The NHS Dictionary of Medicines and Devices (dm+d, ref: http://www.dmd.nhs.uk) is the NHS standard for drug and device identification. It provides a stable, unique term (description) and identifier (code) for all drugs and devices used in the treatment of patients. It enables clinical system interoperability by ensuring safe and reliable

exchange of information on drugs and devices. The dm+d uses the SNOMED coding scheme (ref: http://www.snomed.org).

6.5.1 Native dm+d

Refer to the dm+d implementation guidance documents for more information related to the use of dm+d, including that related to the use of "native" dm+d. These are available from the dm+d web site (http://www.dmd.nhs.uk).

Where a medication item is not in the dm+d, current FP10 processes must be followed and no EPS prescription message will be generated.

6.5.2 Dosage Instructions

The prescriber is required to enter a medication item dosage. The use of a generic default value, for example "Use as directed", if a value is not entered, is not acceptable from a clinical perspective. The user must be asked to select a dosage instruction from a pick list, type by hand or have the system populate with a valid and clinically safe dosage instruction relevant to the prescribed medication or clinical circumstances.

As per BNF guidelines, the dosage must be presented to the user without abbreviation although it may be entered and stored within the PMR in an abbreviated form. Within HL7 messaging, the dosage instruction must be represented without abbreviation.

6.5.3 Unit of Measure

The system must associate each VMP (and hence each related AMP, VMPP or AMPP) with a single unit of measure which will then be used by prescribers and dispensers. This relationship is not directly defined within the dm+d and must be determined via navigation of the dm+d concepts and their data attributes.

To identify the unit of measure for a VMP concept, the unit of measure associated with the related VMPP concepts must be used. In the majority of cases, a common and usable unit of measure will exist.

For example;

> "Paracetamol 500mg soluble tablets", all VMPP units of measure are recorded as "tablet"
>
> "Salbutamol 100micrograms/dose inhaler CFC free", all VMPP units of measure are recorded as "dose"

Note. Some medication items exist where two or more units of measure are recorded within VMPP concepts. This applies to a small number of concepts where products are expressed, for example, either by weight (gram) or volume (ml), or by dose or weight (gram). Examples are;

- VMP "White soft paraffin 15% / Liquid paraffin light 6% cream"
- AMP "ReplensMD vaginal mosituriser (Crescent Pharma OTC Ltd)"

In such circumstances, the prescriber must be given the ability to prescribe using any of the relevant units of measure. For the examples above this would be either by 'gram' or 'ml', or by 'gram' or 'dose'.

6.5.4 Quantity

A quantity of medication must be expressed in HL7 as a numeric value using the "Alternative Units" flavour of quantity with the dm+d unit of measure as defined in the above section. An example is shown below.

```
<quantity value="200" unit="1">
   <translation value="200"
codeSystem="2.16.840.1.113883.2.1.3.2.4.15" code="3317411000001100"
displayName="dose" />
</quantity>
```

In the example above;

- 'quantity/@value' and 'translation/@value' represent the numeric quantity of the unit of measure. Always populate with the same value.
- 'unit' is the UCUM representation of the unit. If UCUM units are not available or the unit of measure is not known within UCUM the fixed value of "1" must be used
- 'codeSystem' is a fixed OID for SNOMED (dm+d)
- 'code' is the SNOMED (dm+d) code for the unit of measure
- 'displayName' is the dm+d text representation of the unit of measure.

6.5.5 Review Date

The HL7 entity "ReviewDate" is schema optional and described within the DMS as required for repeat dispensing prescriptions. This is true however a review date is also required for repeat prescribing prescriptions and should be populated where a medication review date is known to the prescriber.

Where a prescription contains medication with two separate review dates, for example where one medication item is due for review in 6 weeks while another medication item is due for review in 3 months, the review date entity should be defaulted with the earliest date, with this value amendable by the prescriber if required.

6.5.6 Timeliness of Local dm+d Data

The dm+d terminology is updated weekly and is available to download from the NHS TRUD Service (https://isd.hscic.gov.uk).

It is important that local systems use an up-to-date version of the dm+d to ensure that new concepts or amendments within the dictionary are available. The system supplier must ensure that the version of dm+d installed at each site is no more than 2 months older than the current version of dm+d as published on the TRUD website.

Suppliers can choose to implement dm+d directly or take a value-added terminology from a 3rd party supplier. To account for those suppliers who use a 3rd party terminology, a period of 2 months is sufficient for each supplier to process, manipulate and distribute the latest version of the dm+d.

6.5.7 Non dm+d mapped medication items

If the System uses a proprietary clinical terminology in addition to the NHS dm+d, then within medication picking lists, any items not mapped to the dm+d and hence not supported by the EPS must be indicated so that the prescriber is immediately aware that an FP10 will be required for this patient.

Ref	Requirement
6.5.1	The System must use the NHS Dictionary of Medicines and Devices (dm+d) coding scheme for medication item information within HL7 messaging. Specifically, this must be the SNOMED CT code and the dm+d name/description for the medication item.
6.5.2	The System must ensure that all references within the dm+d can be handled without string truncation. **Note**. String wrapping onto an additional line is permitted.
6.5.3	The prescriber is required to enter a medication item dosage. The use of a generic default value, for example “Use as directed”, if a value is not entered, is not acceptable from a clinical perspective. The dosage must be presented to the user without abbreviation although it may be entered and stored within the PMR in an abbreviated form. Within HL7 messaging, the dosage instruction must be represented without abbreviation.
6.5.4	The System must record prescribed medication items using the dm+d "Virtual Medicinal Product Name" or "Actual Medicinal Product Description" and the associated SNOMED code. These data fields are described within the dm+d technical specification. **Note**. The System must not prescribe at the dm+d pack level using the VMPP or AMPP concepts. **Note**. dm+d descriptors must be used with the correct case (i.e. uppercase/lowercase characters) as defined within dm+d.
6.5.5	The System must use the HL7 “Alternative Units” representation of quantity when expressing a quantity of medication. The unit of measure must be that associated to the prescribed medication item derived from the related VMPP concepts. The HL7 attributes of ‘value’, ‘unit’, ‘codeSystem’, ‘code’ and ‘displayName’ must be populated.
6.5.6	The System must use the dm+d VMP name or AMP description, where these concepts exist or where a mapping from a proprietary terminology exists, within the application user interface (e.g. on-screen, picking lists etc.) and within patient medication records held locally.

Ref	Requirement
6.5.7	The System must use the dm+d VMP name or AMP description, where these concepts exist or where a mapping from a proprietary terminology exists, on printed output from the system (e.g. FP10 or prescription token).
6.5.8	If the System implements a mapped solution from another terminology service to dm+d then the System must adhere to the definition of "Native dm+d".
6.5.9	The System must implement the dm+d requirements defined within this specification for phases 3 and 4 of the EPS Implementation Strategy regardless of which Parent Prescription HL7 message version is being created.
6.5.10	The System should populate the "ReviewDate" entity, when known, for repeat prescribing and repeat dispensing prescriptions. Where more than one review date applies for the prescribed items, the review date entity should be defaulted with the earliest date, with this value amendable by the prescriber if required.
6.5.11	The System must use the dm+d unit of measure description, where these concepts exist or where a mapping from a proprietary terminology exists, within the application user interface (e.g. on-screen, picking lists etc.), within patient medication records held locally and on printed output from the system (e.g. FP10 or prescription token).
6.5.12	The version of the dm+d in use by the system must be no older than 2 months from the latest version of the dm+d as published weekly on the TRUD.
6.5.13	The system must not allow free-text entry of medication where the medication is defined within the local drug dictionary. Free-text entry is permissible as part of medication search functions, but once identified, the medication must be defined via its drug dictionary identifiers and descriptions. The same guidance applies when selecting a unit of measure related to the prescribed quantity of medication. The only exception is when prescribing a medication that is not known within the local drug dictionary.

Ref	Requirement
6.5.14	As part of local implementation of EPS R2, existing repeat templates containing medication coded with proprietary terminologies (i.e. not dm+d) should be migrated or manually updated to use dm+d terms. Without doing this, further issues of repeat medication will not be prescribed via the EPS R2 as only dm+d terms can be used. The prescribing system should support the migration of such repeat templates to use dm+d terms.
6.5.15	If the System uses a proprietary clinical terminology in addition to the NHS dm+d, then within medication picking lists, any items not mapped to the dm+d and hence not supported by the EPS must be indicated so that the prescriber is immediately aware that an FP10 will be required for this patient, for this medication item.
6.5.16	Systems must format the PQ (Physical Quantity) data type without unnecessary trailing zeros. For example, “12.5” instead of “12.50”.

6.6 Prescription and Medication Item Identifiers

Each prescription and medication item within a prescription is uniquely identified by a locally generated Universal Unique Identifier (UUID).

Note. This section of the specification applies to EPS Release 2 only. For the specification relating to EPS Release 1 please refer to version 06 of this document.

6.6.1 Short Form Prescription Identifier

For EPS Release 2, an additional prescription identifier of 18 characters is introduced, known as a Short Form Prescription ID. The purpose of the Short Form Prescription ID is to identify the prescription during its lifecycle within the Spine (i.e. prescribe, dispense & claim). The prescription UUID is retained to provide the link through to the Spine medication record within the PSIS and must be included as the first identifier within the prescription message.

The format of the Short Form Prescription ID is as follows;

<*RandomNumber*>-<*PracticeODSC*ode>-<*PracticeSequence*><*CheckDigit*>

Where;

<*RandomNumber*> is a locally generated random number each time a Prescription ID is generated of length 6 hexadecimal characters.

<*PracticeODSC*ode> is the unique ODS code for the practice as defined within the Spine SDS of length 6 characters. Where the prescriber ODS code is shorter than 6 characters it must be zero-padded up to six characters from the start of the ODS code, e.g. “0A1B2C”.

<*PracticeSequence*> is an incremental sequence number starting from 00000 that is reset after FFFFF back to zero of length 5 hexadecimal characters. For systems that support multiple practices, a sequence number per practice is required. This is to

ensure uniqueness of prescriptions within the Spine EPS component during the prescription lifecycle.

<*CheckDigit*> is calculated on the entire ID using the ISO/IEC 7064:2003 MOD 37-2 standard. The check digit algorithm is identical to that using for EPS Release 1.

Note. Hyphens are always included to separate the ID into 3 blocks of 6 characters.

Note. The implementation of the MOD 37-2 standard uses a "+" character for char 36 opposed to a "*" character.

Short Form Prescription ID example (for illustration purposes only);

83C40E-A23856-00123W

6.6.2 Universal Unique Identifiers (UUIDs)

When UUIDs are used within HL7 messages they must be represented in an upper case human-readable hexadecimal format where hyphen separators are used as per the example below and as defined by the 'datatype' schema within the DMS.

UUID example (for illustration purposes only);

34026084-A445-84AD-2D01-97D69ED25865

Ref	Requirement
6.6.1	The System must be able to generate both a 32-character UUID and an 18-character Short Form Prescription ID.
6.6.2	The representation of UUIDs and the Short Form Prescription ID within HL7 messages must be in upper case characters.
6.6.3	Where a single instance of a System supports multiple practices (for example in thin client architecture) the 'PracticeSequence' part of the Short Form Prescription ID must be a separate incremental number for each practice. A practice can be identified as an organisation with a unique ODS code.
6.6.4	The UUID must be the first identifier (i.e. the "id" element) within the "pertinentPrescription" entity of the Parent Prescription HL7 message. The Short Form Prescription ID, using the OID "2.16.840.1.113883.2.1.3.2.4.18.8", must be the second identifier within the "pertinentPrescription" entity of the Parent Prescription HL7 message.
6.6.5	The Short Form Prescription ID must always contain the two hyphen characters (i.e. within HL7 messages, on screen, and when represented as a machine readable barcode).

Ref	Requirement
6.6.6	The UUID must always contain the four hyphen characters when represented in HL7 messaging, on-screen or in text printed form. The hyphen characters are only omitted when represented as a machine readable barcode (to align with the EPS Release 1 requirements). See section 6.12 for bar coding requirements.
6.6.7	The System must provide a prescription search facility to locate prescriptions by Prescription ID from within the system PMR, both from historic prescription records and for prescription awaiting authorisation or electronic signing. Where a number of prescriptions have been post-dated then it must be possible to view the Prescription ID for any of the prescriptions. The Prescription ID must be visible to the user and capable of being copied to the operating system clipboard.

6.7 Dispensing Contractors and Nomination

As per current processes, a patient may require prescribed items to be authorised across different prescriptions to allow for dispensing by different dispensing contractors.

The attribute “Dispensing Site Preference” of the Parent Prescription message is used to indicate which type of dispensing contractor is applicable to the prescription.

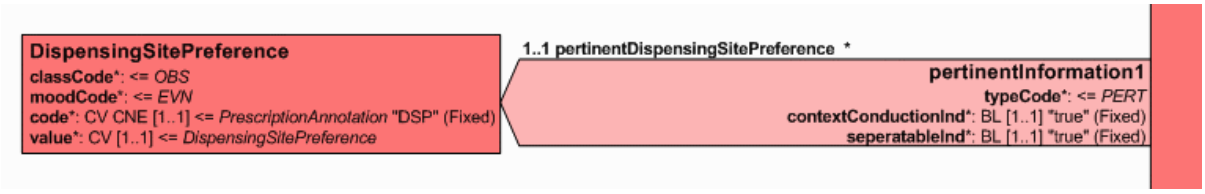

Figure 6 - Dispensing Site Preference

Four dispensing site preference codes are defined within the MIM. These are shown below.

Dispensing Site Preference (see MIM)

Code	Description
P1	Other (e.g. Community Pharmacy)
P2	Appliance Contractor
P3	Dispensing Doctor
0004	None

The patient’s PDS demographic record will inform the System of which types of nominated dispensing contractor have been set.

Where a patient has no nominated dispensing contractor the code “0004” must be used. For EPS Release 1, the Dispensing Site Preference must be set to “0004” for all prescriptions as the nomination service is not enabled.

For patients with a nominated dispensing contractor, the following rules apply.

1. If the patient wishes to use their nominated dispensing contractor, the appropriate code ("P1", "P2" or "P3") must be recorded within the "Dispensing Site Preference" attribute.
2. Any medication item within the dm+d, with the exception of oxygen and items out of EPS scope, can be prescribed on a prescription for a community pharmacy or dispensing doctor.
3. Only appliance medication items can be prescribed on a prescription for an appliance contractor.
4. A patient can choose not to use their nominated dispenser at any time and for any medication item. Prescriptions containing such items must have the Dispensing Site Preference set to "0004".
5. The user must be able to re-allocate a prescribed medication item (subject to rule 3) to any prescription. For example, to allow an appliance to be dispensed by a community pharmacy if required by the patient.
6. Defaulting of prescription items to various contractors is otherwise at the discretion of the supplier.

When a nominated dispenser is used, the ODS code of the nominated dispenser must be recorded within the ‘R_AgentNPFITOrganisationSDS’ CMET linked to the ‘performer’ act relationship. This must be populated with the ID (the ODS code) of the nominated dispenser for the appropriate contractor type held within the patient’s demographic record within the Spine PDS.

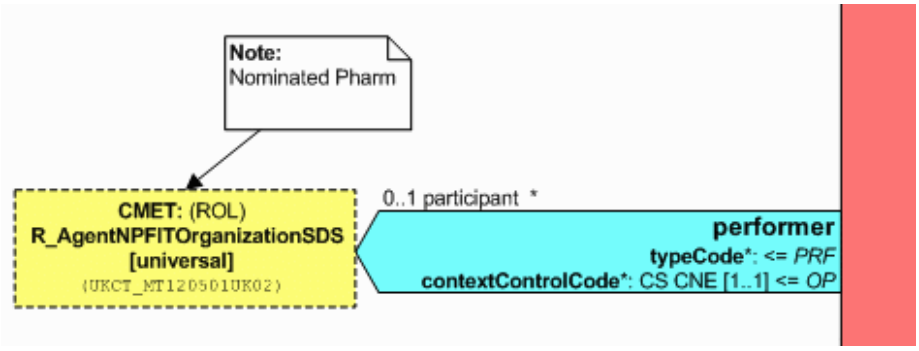

Figure 7 - Nominated Dispenser Information

Where a nominated dispenser is not available, or the patient does not wish to use their nominated dispenser then this information must be omitted.

Note. To support prescription token printing requirements (see section 6.12.3), the System will be required to query Spine SDS for the organisational details for the patient’s nominated dispenser.

Ref	Requirement
6.7.1	The System must implement the functionality to identify a prescription for a nominated dispenser using the "Dispensing Site Preference" and "Performer" entities within the Parent Prescription HL7 message.
6.7.2	The System must ensure that on a nominated prescription for an appliance contractor, only appliance/device items are prescribed.
6.7.3	The System must be capable of allowing a user to override a patient's nominated dispenser by indicating that an individual prescription is NOT for dispensing at the patient's nominated dispenser.
6.7.4	The user must be able to re-allocate a prescribed item (subject to requirement 6.7.2) to any prescription. For example, to allow an appliance to be dispensed by a community pharmacy if required by the patient.
6.7.5	Requirement removed
6.7.6	Requirement removed ~~The System must be capable of allowing a user to override a patient's nominated dispenser and choose a "one-off" nomination to a different but verified as EPS enabled using the Authority's Web Services, dispenser of the patient's choice. This will not update the nomination preferences held within the Demographics service, thus no PDS General Update interaction shall be submitted.~~ ~~When a "one-off" nomination is set, the user must be alerted to the fact that this is a one-off nomination, the patient's nominated preferences within the national Demographics service have not been updated, and this one-off nomination will only apply to the current prescription being authorised.~~
6.7.7	The System must make clearly visible to the user if the patient has nominated dispensing contractors, including at least their name and ODS code. This information must be visible at all times when in the context of a patient's medication record, for example, within the patient demographic summary.
6.7.8	When registering a new patient, who has an existing nomination, the system must provide a prompt for the user to confirm that the patient's existing nomination is still suitable.

6.8 Urgent and Non-Urgent Prescriptions

Two interactions are defined within the MIM for a Parent Prescription message;

- Parent Prescription - PORX_IN020101UKxx
- Parent Prescription (Non-Urgent) - PORX_IN020102UKxx

The System must only use the “Parent Prescription - PORX_IN020101UKxx” interaction. The “Parent Prescription (Non-Urgent) - PORX_IN020102UKxx” interaction that was previously used for non-urgent / repeat prescriptions has been deprecated.

Ref	Requirement
6.8.1	The System must implement the “Parent Prescription - PORX_IN020101UKxx” interaction for all prescription messages.
6.8.2	Requirement removed ~~The default messaging interaction for prescriptions resulting from a face-to-face GP consultation must be ‘urgent’.~~
6.8.3	Requirement removed ~~The default messaging interaction for repeat prescriptions where no face-to-face consultation has occurred must be ‘non-urgent’.~~
6.8.4	The System must ensure that all prescriptions are sent immediately to the system’s Message Handler Service (MHS).
6.8.5	Requirement removed ~~The System must ensure that the user can choose which type of messaging interaction to use (i.e. ‘urgent’ or ‘non-urgent’) for repeat prescriptions and send these as ‘urgent’ if required.~~
6.8.6	Requirement removed ~~To avoid confusion, the words ‘Immediate’ and ‘Routine’ should be used within the System user interface to distinguish between the ‘urgent’ and ‘non-urgent’ interactions.~~

6.9 Supplementary Messaging Requirements

The following sub sections provide supplementary requirements for messaging which supersedes those requirements defined within the MIM.

6.9.1 Attribute: repeatNumber

The ‘Prescription’ and ‘LineItem’ entities contain a ‘repeatNumber’ attribute.

For a **repeat prescribing** prescription, the following rules apply;

1. At the prescription level set the ‘low.value’ attribute to 1
2. At the prescription level set the ‘high.value’ attribute to 1
3. At the line item level set the ‘low.value’ attribute to 1
4. At the line item level set the ‘high.value’ attribute to 1

For a **repeat dispensing** prescription, the following rules apply;

1. At the prescription level set the ‘low.value’ attribute to 1
2. At the prescription level set the ‘high.value’ attribute to the number of authorised repeats for the prescription
3. At the line item level set the ‘low.value’ attribute to 1
4. At the line item level set the ‘high.value’ attribute to the number of authorised repeats for that line item. The EPS supports values up to 99. The System must support at least a maximum value of 26 to allow for 6 months of weekly prescriptions.

Note. For repeat dispensing, a line item can be authorised for less repeats than another line item but no line item can be repeated more times than the overall prescription. A line item authorised for less repeats than the prescription will be set to the status of “Expired” by the Spine after the final authorised dispensing of that line item occurs.

6.9.2 Entity: OriginalPrescriptionRef

The Parent Prescription message contains the optional entity ‘OriginalPrescriptionRef’. The MIM includes the following note for the use of this entity; "Repeat prescriptions only". See Figure 8.

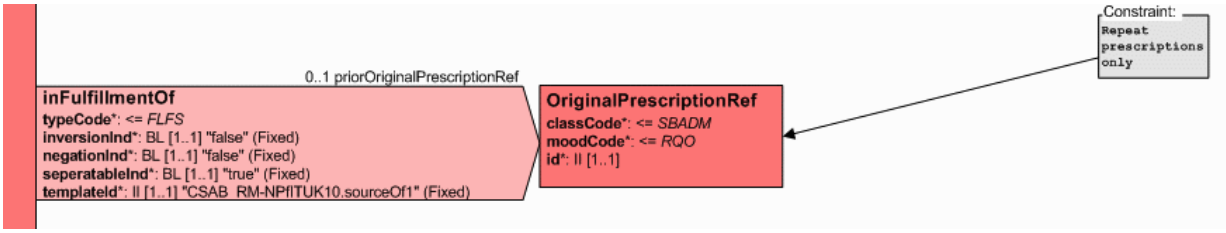

Figure 8 - OriginalPrescriptionRef

Where a repeat prescription has been created containing medication items from multiple original prescriptions then this entity can be omitted or populated with the ID from the most relevant original prescription (where relevancy is at the discretion of the supplier).

6.9.3 Entity: DaysSupply

The ‘DaysSupply’ entity is required for repeat dispensing (repeatable) prescriptions only.

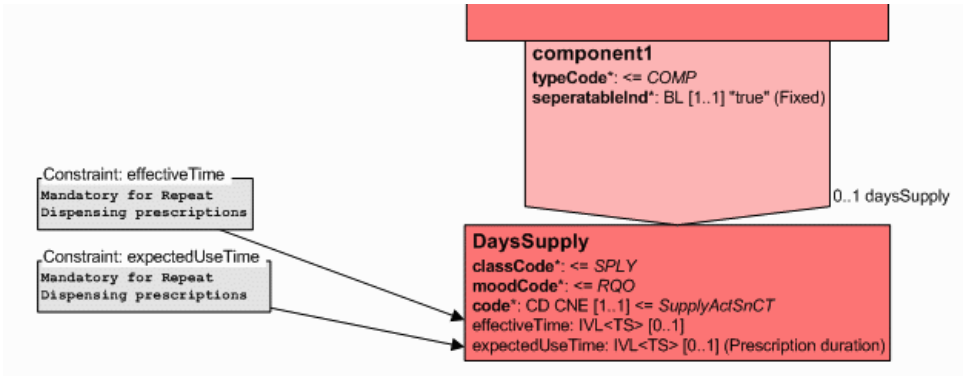

Figure 9 - DaysSupply

The ‘effectiveTime’ attribute defines the validity period for the prescription authorisation. This period must start (the ‘low.value’) at the date of prescribing and cannot exceed 12 months (the ‘high.value’). Typically, most repeatable prescriptions will be authorised for a validity period of either 6 or 12 months.

The ‘expectedUseTime’ attribute within ‘DaysSupply’ defines the expected duration, in days, of each issue of the prescription. A default value of 28 can be used which must be amendable by the prescriber when required. The value must be an integer value greater than zero. A sensible upper limit validation should be included within the System. If this value is omitted, the Spine will assume a value of 28.

6.9.4 Entity: AdditionalInstructions

For EPS Release 2 the ‘AdditionalInstructions’ entity has two purposes.

6.9.4.1 Additional Medication Specific Clinical Information

Clinical information relating to a prescribed medication item that cannot be conveyed within dosage instructions is populated within the ‘AdditionalInstructions’ entity.

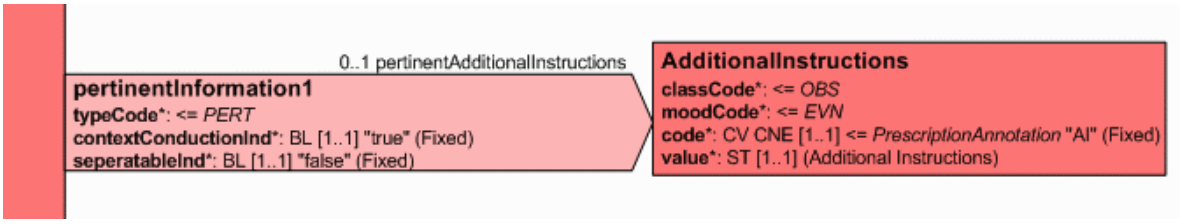

Figure 10 - Additional Instructions

Examples of additional instructions are;

- For certain drugs which require monitoring, such as Lithium or Amiodarone, additional instructions to inform patients how often they need to have a blood test or a review check-up.
- To explain changes in dosage, for example, “Dosage has been increased on advice of the hospital”.

One scenario where additional instructions must be populated is when the current prescribed medication item is the last authorised repeat of that medication within a repeat prescribing cycle. Appropriate text, such as “Last authorised repeat” must be included within the additional instructions to inform the dispenser and to allow the dispenser to communicate to the patient or patient representative. Note that for repeat dispensing, the ‘repeatNumber’ attribute conveys this information, see section 6.9.1).

Additional clinical information is formatted as plain text within the ‘value’ attribute.

6.9.4.2 Additional Patient Specific Information

Patient specific clinical information can be included, separated from additional medication specific information, via semi-structured formatting within XML CDATA tags to maintain schema integrity.

Specific additional information will be used and structured in two ways.

1) The first is to represent a current authorised repeat medication list which would be typically printed on the right hand side of the FP10 stationery. Where this is included,

each medication item must be formatted within a <*medication*> XML tag. Each <*medication*> tag must contain a single medication statement. A medication statement is free text but must contain the medication item name/description using dm+d terms, where these concepts exist or where a mapping from a proprietary terminology exists, otherwise expressed using proprietary terms. Where applicable the statement should contain the current issue number and maximum number of issues authorised, e.g. “Bendroflumethiazide 2.5 mg Tablets (3/6)”. It may also contain dosage instructions or other relevant information.

2) The second use will be for patient specific information formatted as free-text within any number of <*patientInfo*> XML tags. Each <*patientInfo*> tag must contain a single information statement. Examples include “Please make an appointment to see your GP” or “Review date due”.

An example “AdditionalInstructions” entity showing both medication and patient specific information is shown in Figure 11.

```
<pertinentAdditionalInstructions classCode="OBS" moodCode="EVN">
   <code codeSystem="2.16.840.1.113883.2.1.3.2.4.17.30" code="AI"/>
   <value>
<![CDATA[
<medication>Bendroflumethiazide 2.5 mg Tablets (3/6)</medication>
<medication>Salbutamol 100micrograms/dose inhaler CFC free 200 dose (2/6)</medication>
<patientInfo>Please make an appointment to see your GP</patientInfo>
<patientInfo>Review date due</patientInfo>
]]>
Dosage has been increased on advice of the hospital
   </value>
</pertinentAdditionalInstructions>
```

Figure 11 – Example “Additional Instructions”

6.9.5 Entity: PrescriptionType

The vocabulary for the ‘PrescriptionType’ vocabulary is defined within the NHSBSA Overprint Specification.

The System must populate the ‘PrescriptionType’ attribute for the appropriate combination of prescriber and care setting. Retired codes within this vocabulary must not be used.

Ref	Requirement
6.9.1	The System must populate additional instructions related to a prescribed medication item within the “Additional Instructions” entity.

Ref	Requirement
6.9.2	The System must populate additional instructions with appropriate text when the current prescribed medication item is the last authorised repeat of that medication within a repeat prescribing cycle. The text must be the same in both content and configurability as the text that would be printed on the right hand side of an FP10 if a prescribed medication is the last authorised repeat.
6.9.3	The System must populate additional instructions related to the patient within the "Additional Instructions" entity of the FIRST prescribed line item and encapsulate within XML CDATA tags.
6.9.4	Additional patient information related to current repeat medication must be formatted within <*medication*> XML tags. Each <*medication*> tag must contain a single medication statement. A medication statement is free text but must contain the dm+d medication item name/description. It may also contain dosage instructions or other relevant information. Where applicable the medication statement should contain the current issue number and maximum number of issues authorised, e.g. "Bendroflumethiazide 2.5 mg Tablets (3/6)".
6.9.5	Additional patient information other than that for current repeat medication must be formatted as free-text within <patientInfo> XML tags.
6.9.6	The 'expectedUseTime' attribute within 'DaysSupply' should be populated with an integer value, greater than zero, for repeat dispensing prescriptions to define the expected duration, in days, of each issue of the prescription. A sensible upper limit validation should be included within the System. If this value is omitted, the Spine will assume a value of 28.
6.9.7	Requirement removed
6.9.8	Character encoding rules for the population of the "Additional Instructions" entity are as follows. • When used, the CDATA block must be at the start of the <value> element, followed by the plain text additional instructions outside the CDATA block. • Content within CDATA must be well-formed XML. • The order of the XML elements within the CDATA block must be zero or many <medication> elements followed by zero or many <patientInfo> elements.

Ref	Requirement
6.9.9	For repeat dispensing prescriptions and the repeatNumber high value, the System must support at least a maximum value of 26 otherwise a maximum value of 99.
6.9.10	The System must populate the 'PrescriptionType' attribute for the appropriate combination of prescriber and care setting.

6.10 Prescribing Restrictions with the EPS

The following prescribing scenarios are not permitted when using the EPS. If appropriate in these scenarios, a paper FP10 prescription must be used.

6.10.1 Prescribing for Dead Patients

The System must prevent the creation of prescriptions for dead patients. The System must prevent this based upon the data from PDS or locally 'deceasedTime' is an attribute within the patient's demographic record on the Spine PDS. This applies to both the death status flags within PDS of 'formally' and 'informally' dead.

In addition, a death notification trigger from the PDS will inform the EPS sub-system that a patient has died. On receipt of this information the EPS system will cancel outstanding prescriptions for that patient.

6.10.2 Prescribing for 'Sensitive' Patients

The System must ensure that an electronic prescription cannot be authorised for a patient whose demographic record within Spine PDS is flagged as 'sensitive'. A demographic record that is sensitive will be identified with a 'confidentialityCode' attribute of "S".

Ref	Requirement
6.10.1	The System must ensure that an electronic prescription cannot be authorised for a patient who has deceased.
6.10.2	The System must ensure that an electronic prescription cannot be authorised for a patient whose demographic record within Spine PDS is flagged as 'sensitive'.

6.11 Controlled Drugs

Changes in legislation in 2015 permitted the prescribing of Schedule 2 and 3 controlled drugs using an Advanced Electronic Signature (AES), thus such prescriptions could be prescribed via the EPS.

Table 2 below summarises the EPS requirements for the CD schedules. The terms "Hand signature" and "Electronic signature" expressed in the table are shortened references to the legal definition of signature requirements within government legislation.

Sch.	Signing Legal Requirement	EPS Scope	Expiry Date	EPS Repeat Dispensing		
				R/D allowed	1st Issue expiry	Subsequent Issues expiry[5]
1	N/A	Out of scope	N/A	N/A	N/A	N/A
2	Hand signature or electronic signature	In scope	28 days	No	N/A	N/A
3	Hand signature or electronic signature	In scope	28 days	No	N/A	N/A
4	Hand signature or electronic signature	In scope	28 days	Yes	28 days	Up to 12 months
5	Hand signature or electronic signature	In scope	6 months	Yes	6 months	Up to 12 months

Table 2 - EPS Requirements for the Controlled Drug Schedules

Ref	Requirement
6.11.1	The System must ensure that schedule 1 controlled drugs are not prescribed using the EPS on NHS prescriptions.
6.11.2	The System must allow the prescribing of schedule 2 and 3 controlled drugs using the EPS, via acute prescribing and repeat prescribing.
6.11.3	The System must allow the prescribing of schedule 4 and 5 controlled drugs using the EPS, via acute prescribing, repeat prescribing and repeat dispensing.
6.11.4	The System must not allow schedule 2 and 3 controlled drugs to be prescribed using repeat dispensing.
6.11.5	The System must include the means to enable/disable the functionality to prescribe schedule 2 and 3 controlled drugs via the EPS. Such functionality will not be permitted until instructed by NHS Digital.

[5] Subsequent issues expiry period from the date of the original authorisation of the prescription.

Ref	Requirement
6.11.6	Requirement removed ~~When prescribing a Schedule 2 or 3 controlled drug medication, the System must populate the quantity expressed in words within an <originalText> element inside the quantity expressed in figures using the "alternative units" HL7 flavour.~~ ~~For example;~~ ~~<quantity value="28" unit="capsule"> <translation value="28" code="428641000" codeSystem="2.16.840.1.113883.2.1.3.2.4.15" displayName="capsule"> <originalText>twenty eight</originalText> </translation> </quantity~~
6.11.7	The System may prescribe schedule 2, 3, 4 or 5 controlled drugs on the same prescription, together with non-controlled drugs.
6.11.8	When prescribing a Schedule 2 or 3 controlled drug medication, the System must populate the quantity expressed in words, prefixed by the text "CD: ". Systems must include the quantity expressed in words as the first item of any instructions relating to the line item. In the case of the first line item this must be after any escaped <*medication*> and <*patientInfo*> elements. Systems must separate the quantity expressed in words from any other instructions with a line break, as indicated by ↲ in the example below: <pertinentAdditionalInstructions classCode="OBS" moodCode="EVN"> <code code="AI" codeSystem="2.16.840.1.113883.2.1.3.2.4.17.30"/> <value><![CDATA[<medication>Phenobarbital 15mg/5ml elixir</medication><patientInfo>Patients can order prescriptions online at www.surgery.nhs.uk</patientInfo>]]>CD: Three hundred and fifty↲ Dosage has been increased upon advice from Specialist</value> </pertinentAdditionalInstructions> Systems must not allow the user to edit the quantity expressed in words and shall only allow the user to edit the quantity expressed numerically, which must then update the quantity expressed in words. Systems must include the quantity expressed in words in all prescriptions of Schedule 2 or 3 controlled drugs. This is to include both new prescriptions and reauthorisations of old repeat templates.

Ref	Requirement
6.11.9	When prescribing a Schedule 2 or 3 controlled drug medication, the numerical quantity must be fully expressed in words. e.g. 12.5 = ““twelve point five”. 150 = “one hundred and fifty”
6.11.10	Requirement removed ~~Requirement 6.11.6 must not be enabled until notified by the Authority. When enabled, requirement 6.11.8 must be disabled. This is to ensure the quantity in words is only populated in one place within the electronic prescription and to manage the transition between the tactical requirement (6.11.8) and strategic requirement (6.11.6).~~

6.12 Prescription Token Printing and Authorisation

The use of paper to support the prescribing, dispensing and reimbursement process continues for many scenarios.

From EPS implementation phase 3 and the introduction of nomination, the use of a paper token to identify the prescription becomes optional for those patients using a nominated dispenser which are also signed with an Advanced Electronic Signature (AES). Tokens for nominated prescriptions are not hand-signed in ink.

The overprinting requirement for EPS tokens is published separately within the document “EPS Prescription Token Specification” (ref: NPFIT-ETP-EDB-0027).

6.12.1 Printing Requirements for each EPS Implementation Phase

The requirements for printing and prescriber authorisation during the EPS implementation phases is summarised in the following table.

Imp. Phase	Software	FP10 & Authorisation	Prescription Token & Authorisation
Phase 1 & 2	Release 1	FP10 mandatory. Authorisation by hand signature.	N/A
Phase 3	Release 2	FP10 mandatory for non-nominated prescriptions. Authorisation by hand signature.	Token optional for nominated prescriptions. Authorisation for nominated prescriptions by AES.

Phase 4	Release 2	FP10 as directed by legislation. Authorisation by hand signature.	Token, or alternative mechanism, mandatory for non-nominated prescriptions. NB. Alternative mechanisms for using a paper token will be available during Phase 4 operations. These are not defined within this specification. Token optional for nominated prescriptions. Authorisation by AES.

Table 3 - Printing and Prescriber Authorisation Requirements

6.12.2 Example Overprinted FP10 Prescription

In all cases where a token is printed, the technical requirement is an overprint onto existing FP10 stationery. The FP10 stationery has been modified to support the EPS. Modified FP10 stationery to support EPS has been introduced into primary care settings from the beginning of 2005.

Shown in Figure 12 is an example of a nominated and electronically signed prescription token.

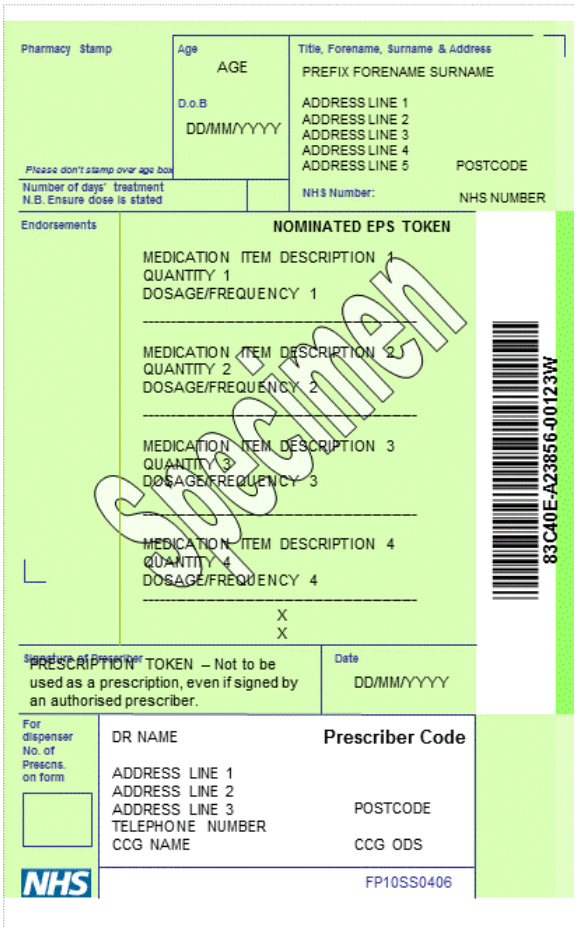

Figure 12 - Example prescription token

An electronically signed prescription sent via the EPS cannot include hand written amendments on the prescription token. The token is not hand signed therefore it is not a legal prescription, so any amendment would be ignored by the dispenser.

If an error is identified within the electronic prescription then this can be corrected using cancellation, see section 6.16.

6.12.3 Printing of Date and Nomination Details on Right Hand Side of Prescription Token

The date the prescription token was printed should be shown on the right hand side of the prescription token.

Where a patient wishes their prescription to be received by their nominated dispenser (i.e. the prescription is nominated), and if a prescription token is printed, the right hand side of the FP10 stationery must include the patient's nominated dispenser organisation details. This is to provide a written reminder to the patient that this prescription is being directed to their nominated dispenser.

For example;

```
Printed on 24/07/2007.
This prescription has been sent to your nominated dispenser.
ACME Pharmacy Ltd
10 High Street, Anytown, Anyshire AA2 1AB
```

The demographic details of the patient's nominated dispenser can be obtained from Spine SDS if not known to the local system. The patient's PDS record will return the ODS code of their nominated dispenser which can be used as an input parameter when querying Spine SDS. See section 5.2.4.

6.12.4 Prescription Identifier Bar Coding

The Prescription ID must be printed as a machine-readable bar code on the prescription token. Refer to the document "EPS Prescription Token Specification" (ref: NPFIT-ETP-EDB-0027) for barcode requirements.

The standard for bar coding the prescription identifier is the "Code 128" scheme using either character set A, B or C.

6.12.5 Guidance when printing Prescription Tokens

The System should prevent or discourage a prescription token from being printed for an EPS R2 prescription that has not yet been electronically signed. This is to mitigate the possible scenario where a token is printed but then the prescription is amended before being electronically signed, thus the token may not reflect what has been prescribed. This could cause prescriber, patient or dispenser confusion and therefore should be avoided.

Printed tokens for Schedule 2 or 3 controlled drugs must be printed with the quantity expressed in both words and figures, in the same manner as populated within the ParentPrescription message, e.g. "28 (twenty eight) capsule".

When printing a prescription token, the System should allow the default printer to be configurable for different scenarios.

For example, for acute prescriptions the most appropriate default printer would normally be the local printer, i.e. the same that would be used if printing an FP10. For prescription tokens required for prescriptions authorised during the bulk signing process, the local printer (in the GP's consultation room) is less appropriate, as such tokens would be better printed within the practice administrative area.

Ref	Requirement
6.12.1	The System must be capable of printing electronic prescription tokens as defined in the document "EPS Prescription Token Specification" (ref: NPFIT-ETP-EDB-0027). This includes the "Repeatable Prescription Authorising Token" optionally required for electronic repeat dispensing.
6.12.2	The System must be capable of generating additional tokens for a prescription sent to the Spine for those cases where medication items span more than one physical paper form.
6.12.3	The System must be capable of reprinting a prescription token for any prescription that has been issued. A reprinted token will be identical to the original. **Note**. The electronic prescription must not be re-sent to the Spine following a reprint.
6.12.4	The System must ensure that the order of medication items printed on the prescription token or FP10 is in the same sequential order as medication items contained within the 'Parent Prescription' HL7 message.
6.12.5	If the prescription has been flagged for the patient's nominated dispenser, the System must print the patient's nominated dispenser organisation name, organisation telecom, organisation address and postcode on the right hand side of the prescription token.
6.12.6	The System must be capable of generating barcodes using the Code 128 scheme using either character set A, B or C.
6.12.7	The System must ensure that when printed using a laser printer, bar codes can be electronically scanned using a bar code reader.
6.12.8	The System should print the date the prescription token was printed on the right hand side of the prescription token.

Ref	Requirement
6.12.9	The System should prevent or discourage a prescription token from being printed for an electronic prescription that has not yet been electronically signed. For the avoidance of doubt this requirement does not apply when printing FP10 or bar-coded FP10 prescriptions.
6.12.10	The System must be capable of printing a prescription token, at a later date, after the prescription has been submitted to the EPS, even if the at the time of submission a token was not printed.
6.12.11	The System must print on the prescription token the quantity prescribed in both words and figures for prescribed items that are Schedule 2 or 3 controlled drugs, using the same syntax as used within the ParentPrescription message, e.g. “28 (twenty eight) capsule”.
6.12.12	When printing a prescription token, the System must allow the default printer to be configurable for different scenarios. For example, for acute prescriptions the most appropriate default printer would normally be the local printer, i.e. the same that would be used if printing an FP10. For prescription tokens required for prescriptions authorised during the bulk signing process, the local printer (in the GP's consultation room) is less appropriate, as such tokens would be better printed within the practice administrative area.

6.13 Advanced Electronic Signature Requirements

The “Parent Prescription” HL7 message can include an Advanced Electronic Signature (AES) of the authorising prescriber – the HL7 ‘author’ entity. Where a prescription message is electronically signed by the author, the electronic message represents the legal prescription entity.

Refer to separate digital signature documentation for more information regarding the technical requirements for signing (refs: NPFIT-ETP-EDB-0064 and NPFIT-FNT-TO-IG-0019).

During EPS Implementation Phase 3, non-nominated prescriptions are not electronically signed and in these scenarios the paper FP10 is the legal prescription, which can be dispensed by any dispenser, EPS-enabled or not.

During EPS Implementation Phase 3, an AES is required when a patient’s nominated dispenser details are captured within the prescription AND the “dispensing site preference” is not of value 0004 (“None”) which indicates that the patient wishes to use their nominated dispenser.

For EPS Implementation Phase 4, all electronic prescriptions using the EPS must be electronically signed. Paper-based FP10 prescriptions will be used for contingency

prescribing, prescribing for sensitive patients, out-of-hours prescribing when EPS software is not available, or at patient request.

To enable the transition between Phase 3 and Phase 4, the System must be configurable to enable the switch to digital signing all prescriptions as a system parameter.

The System must check the user content commitment certificate is valid at the time of signing an electronic prescription.

The System must check that the certificate used for electronic signing is the content commitment certificate, opposed to the authentication certificate, on the user's NHS smartcard.

6.13.1 Bulk Signing of Prescriptions

The electronic equivalent of a prescriber signing a batch of FP10 prescriptions will be implemented through the repeated process of the authorised user entering their secret pass code.

A collection of "Parent Prescription" HL7 messages can be created by the System for bulk signing. An authorised prescriber must attach his/her Content Commitment Electronic Signature to each electronic prescription.

The process of applying the prescriber's electronic signature, from a user perspective, would be the following;

1. Review clinical content of prescriptions one-by-one
2. Select multiple prescriptions to authorise (i.e. sign)
3. Bulk sign prescriptions and enter authorisation pass code once
4. Prescriptions are electronically signed and submitted.

Ref	Requirement
6.13.1	The System must ensure that the HL7 Parent Prescription participation 'author' records the details of the prescriber who is signing the prescription, where this is either an electronic signature or a hand-written signature in ink.
6.13.2	Requirement removed
6.13.3	The System must provide the necessary user interface to allow the user to determine whether an electronic prescription must be electronically signed.
6.13.4	The System must include a configurable switch to enable the transition related to electronic signature requirements between EPS implementation phases 3 and 4 on a site-by-site basis.

Ref	Requirement
6.13.5	Where the prescription is required to be electronically signed the System is required to generate the digital signature of the prescriber and apply this to the prescription message where defined in the DMS. Use of the Content Commitment Electronic Signature must convey to relying parties that the signer has committed to the content being signed (i.e. applied after a manual acceptance such as a system prompt). Where a digital signature is not required the 'signatureText' element must be coded as: `<signatureText nullFlavor="NA"/>` Refer to the electronic signing documents for more information.
6.13.6	The System must support the bulk signing of electronic prescriptions. Use of the Content Commitment Electronic Signature must convey to relying parties that the signer has committed to the content being signed (i.e. applied after a manual acceptance such as a system prompt). Refer to the related documents on digital signatures and signing for more information.
6.13.7	The System must check the user content commitment certificate is valid at the time of signing an electronic prescription.
6.13.8	The System must check that the certificate used for electronic signing is the content commitment certificate, opposed to the authentication certificate, on the user's NHS smartcard.
6.13.9	Additional signing requirements are defined within the documents NPFIT-ETP-EDB-0064 and NPFIT-FNT-TO-IG-0019.

6.14 Prescription Token/FP10 to HL7 Cross Reference

The MIM defines how the "Parent Prescription" HL7 message is constructed while the "EPS Prescription Token Specification" defines how the FP10/token is be printed.

The NHSBSA overprint specification now includes the cross reference that was previously in this section.

6.15 Prescription Rejections

After a "Parent Prescription" message has been submitted to the Spine, the Spine may respond with a rejection message within the application acknowledgement. Coded details for the reason for rejection will be contained within the acknowledgement.

Rejection and error codes are defined within the External Interface Specification (see EIS section 7.6 Domain Error Codes).

The table below lists the possible rejection reasons that may be applicable for a prescription rejection.

Code	Description	Appropriate Action to Take
0001	Patient is recorded as dead	Not applicable to prescribing systems **Note**. The Spine will not reject a prescription for a dead patient however the requirement to check PDS for death status before prescribing prevents this scenario occurring.
0002	Duplicate prescription ID exists	The System must create a new prescription UUID and re-submit the prescription to the Spine.
0003	Digital signature not found	The System must create and apply a digital signature to the prescription and re-submit the prescription to the Spine. **Note**. This rejection reason does not apply until ETP implementation phase 4 when the use of digital signatures is by default.
0007	Patient not found	The prescriber must be notified accordingly.
0008	Unable to process message – information missing	The prescription message has failed content validation at the Spine as mandatory data is missing. The System must add all mandatory data to the message and re-submit the prescription to the Spine.
0009	Invalid message	The prescription message has failed structural validation at the Spine. A defect report should be raised against the local System or the Spine (whichever is in error). The prescriber must be notified accordingly to use a paper FP10 prescription.
0010	Number of items on a prescription should be between 1 and 4	The prescriber must be notified accordingly and asked to split the items across separate prescriptions.
0018	Mismatch in authorised repeat counts	The “repeatNumber” attribute exists at both the prescription and item level. An item cannot be authorised for more repeats than the prescription.
0019	Repeat count should be between 1 and 99	The maximum “high” value for the “repeatNumber” attribute is 99.
0099	Incompatible version of Request. [Additional Information (if any)]	The user should inform their system supplier that an incompatible version of a request message has been used. This scenario may occur when a new version of the EPS is deployed but any messaging incompatibles will be carefully managed by the CFH Programme.
5008	Duplicate item ID exists	The System must create a new line item UUID and re-submit the prescription to the Spine.
5009	Error in check digit	The System must re-calculate / correct the check digit and re-submit the prescription to the Spine.

Code	Description	Appropriate Action to Take
9006	Format of date passed is invalid	The format of a date/time attribute with the prescription does not confirm with the format defined within the DMS. The System must correct the date/time attribute and re-submit the prescription to the Spine.

If the reason for a rejection can be fixed, for example, populating the prescription with a valid number of items or fixing invalid message syntax, then the prescription can be re-submitted using the same prescription ID.

If the reason for a rejection cannot be fixed within the current prescription, for example, if a duplicate prescription ID exists, then a new prescription must be generated and signed. In this scenario, any prescription token issued to the patient will be invalid. In such cases, the patient may be required to re-visit their prescriber to pick up a new token.

During the EPS transition phase, if a non-nominated prescription is rejected this cannot be rectified electronically as the legal prescription exists on paper. In such cases, the supply will be from the FP10 as per current standard operating procedures.

Ref	Requirement
6.15.1	The System must ensure that on receipt of a “Parent Prescription Reject” message, the System informs the prescriber the reason why the prescription has been rejected and update local records accordingly.
6.15.2	The System must enable a prescription that has been rejected to be corrected, where this is appropriate or possible, and to be re-sent to the Spine.
6.15.3	Requirement removed ~~Where a non-urgent prescription is processed at a subsequent point in time by the Spine and rejected (due to the Spine SLAs regarding non-urgent prescriptions), then it is permissible for a resubmission to be send as an urgent prescription to ensure that the prescription is available for dispensing.~~

6.16 Prescription Cancellation

An electronic prescription can be cancelled after submission to the Spine provided the prescription has not been downloaded or processed by a dispenser.

To cancel a prescription the prescribing system is required to send a prescription cancellation request message. A cancellation can be to an individual item level or at the prescription level (which implies that all items are cancelled). Cancellation is applicable to all types of electronic prescriptions (i.e. acute, repeat prescribing and repeat dispensing prescriptions).

The reason for cancellation must be provided by the prescriber. The MIM defines the following reasons for cancellation.

Cancellation Reason Codes (see MIM)

Code	Description
0001	Prescribing error
0002	Clinical contra-indication
0003	Change to medication treatment regime
0004	Clinical grounds
0005	At the Patient's request
0006	At the Pharmacist's request
0007	Notification of Death[6]
0008	Patient deducted - other reason
0009	Patient deducted - registered with new practice

The Spine will reply with a cancellation response message indicating if the request succeeded or failed. The codes within the response message are defined within the External Interface Specification (EIS).

Note. If no cancellation response message is received by the System then there has been a system failure and the prescription should be treated as not cancelled. As the EPS messaging patterns are asynchronous there is no predetermined time in which the response should be received. The Spine architecture supports responses being received within seconds however the messaging SLA is currently 60 seconds for each interaction, thus 120 seconds for the asynchronous request/response.

Refer to separate EPS process guidance detailing the appropriate action to take by the user as a result of each cancellation response.

Cancellation Response Reasons (see EIS)

[6] The 'Notification of Death' (0007) cancellation reason code is used by Spine 2 Prescriptions only and is not for use within prescribing systems

Code	Description	Appropriate Action to Take
0001	Prescription/item was cancelled	The cancellation request was successful, and the user is notified accordingly. If the entire prescription has been cancelled, the wording “prescription cancelled successfully” should be included within the user notification. Where one or more medication items have been cancelled, the wording “prescription item(s) cancelled successfully” should be included within the user notification. If the system cannot determine whether an individual item or the entire prescription has been cancelled, the wording “prescription/prescription item cancelled successfully” should be included within the user notification.
0002	Prescription/item was not cancelled – With dispenser	The cancellation request was unsuccessful because the prescription has been transmitted to a pharmacy for dispensing. The cancellation request identifies the prescription/item to be cancelled and sets a flag in the Spine that should that prescription be returned to the Spine by the dispenser, the prescription will be cancelled, and a cancel response will be sent to the prescriber indicating that the initial cancel request was successful. The user is notified accordingly.
0003	Prescription/item was not cancelled – With dispenser active	The cancellation request was unsuccessful because the prescription has been transmitted to a pharmacy for dispensing and the Spine has identified that dispensing events have been recorded against that prescription. The Spine has been updated accordingly. The response will notify the prescriber which dispenser has the prescription using the ‘Dispenser Information’ block defined within the DMS. It cannot be cancelled. The user must be notified accordingly.
0004	Prescription/item was not cancelled – Dispensed to Patient	The cancellation request was unsuccessful because the prescription has been transmitted to a pharmacy for dispensing and the Spine has identified that dispensing events have been recorded against that prescription. The Spine has been updated accordingly. The prescription is recorded as having been dispensed. The user must be notified accordingly.
0005	Prescription/item had expired	The prescription/item cannot be cancelled because the prescription/item has expired. The user must be notified accordingly.

Code	Description	Appropriate Action to Take
0006	Prescription/item had already been cancelled	The prescription/item cannot be cancelled because a cancellation request from a prescriber has already been received and the prescription has been cancelled. The user must be notified accordingly. If the entire prescription has been cancelled, the wording “prescription cancelled successfully” should be included within the user notification. Where one or more medication items have been cancelled, the wording “prescription item(s) cancelled successfully” should be included within the user notification. If the system cannot determine whether an individual item or the entire prescription has been cancelled, the wording “prescription/prescription item cancelled successfully” should be included within the user notification.
0007	Prescription/item cancellation requested by another prescriber	The prescription/item cannot be cancelled because a cancellation request from a prescriber has already been received and the prescription has been marked for cancellation. This would indicate that the prescription is with a dispenser. In this case, the previous cancellation request has set a flag in the Spine such that should that prescription be returned to the Spine, the prescription will be cancelled and a cancel response will be sent to the prescriber The user must be notified accordingly
0008	Prescription/item not found	The prescription/item cannot be cancelled because the prescription to be cancelled has not been recorded by the Spine. This situation can occur when; • The cancel request arrives in the ETP component of the Spine before the prescription that is being cancelled. See below for guidance on this scenario. • A cancel request is made for a prescription where there is an error in the prescription UUID defined in the prescription message. • The processing of the prescription has been completed by the ETP component and the Spine has been updated accordingly. In all cases the user must be notified accordingly.
0009	Cancellation functionality disabled in Spine	The Spine cancellation functionality has been disabled at the request of the Authority and the message is rejected. The cancellation request will not be processed. The prescriber should seek other means to cancel the prescription.
0099	Incompatible version of Request. [Additional Information (if any)]	The user should inform their system supplier that an incompatible version of a request message has been used. This scenario may occur when a new version of the ETP service is deployed but any messaging incompatibles will be carefully managed by the CFH Programme.

Code	Description	Appropriate Action to Take
5000	Unable to process message. [Additional Information (if any)]	The user should inform their system supplier that a message was rejected by the Spine.
5888	Invalid message	The user should inform their system supplier that a message was rejected as invalid by the Spine.
5006	Format of date passed is invalid	The format of a date/time attribute with the prescription does not confirm with the format defined within the DMS. The System must correct the date/time attribute and re-submit the prescription to the Spine.

The following is an explanation of the approach to handling the situation where a cancel request may be received before the prescription to which it refers.

1. Parent prescription (particularly a non-urgent) message is sent by prescribing site.
2. Cancel message for the prescription is sent by prescribing site.
3. Cancel message for the prescription is received by the Spine (i.e. before the related prescription message)

   The Spine will issue a cancel reject response indicating that the prescription was not found within the EPS. This is the only action that can be done at this stage because the Spine has no knowledge of the prescription and cannot differentiate between a genuine erroneous message and one arriving out of sequence.

   However, in recognition of the fact that this is a cancel request and the prescription may follow, the EPS will record the prescription UUID and reject any subsequent parent prescription message attempting to add this prescription. Thus from a business perspective the prescription will have been cancelled by never having been allowed to be created.

4. Parent prescription message is received by the Spine.
   The Spine will issue a prescription reject response indicating that that the prescription has been cancelled.

The prescribing/site/system should have all the information necessary to implement a suitable process to handle this situation.

Further, a scenario may occur when the Spine does not send back a cancellation response. This would be in the unlikely event when the Spine or a sub-system within the Spine becomes unavailable. The System must alert the user that a cancellation response has not been received from the Spine if a cancellation response message has not been received after pre-defined period of time since the cancellation request was submitted. This period of time should be a system parameter to allow for system behaviour to align with typical response times for asynchronous messaging within the live environment. Within this alert the user must be informed to assume the cancellation process was unsuccessful and that manual means to cancel the prescription must be undertaken (e.g. contacting the patient).

6.16.1 Subsequent Cancellation Response Interaction

If a cancellation is unsuccessful but the status of a prescription is then updated to a state from which it can be cancelled, then the EPS will send a "Subsequent Cancellation Response" interaction to the prescribing system that requested the cancellation.

An example when this will occur is when a prescription has been downloaded by a dispenser before the cancellation request, then returned to the EPS, which sets the prescription status back to "To be dispensed", which allows the EPS to then cancel the prescription.

Scenarios exist where more than one "Subsequent Cancellation Response" interaction will be received by a prescribing system.

Separate responses are triggered to inform the system depending on whether the original cancellation request referenced the Prescription ID only, or the Prescription ID and separate Item IDs.

The following table gives examples.

Number of items on prescription	Nature of cancellation request	Subsequent responses received and content
1 item	By Prescription ID only	1 - prescription was cancelled
1 item	By Prescription ID and Item ID	1 – item was cancelled 2 – prescription was cancelled
2 items	By Prescription ID only	1 - prescription was cancelled
2 items	By Prescription ID and Item ID for item #1 By Prescription ID and Item ID for item #2	1 – item was cancelled 2 – item was cancelled 3 - prescription was cancelled
2 items	By Prescription ID and Item ID for item #1	1 – item was cancelled

6.16.2 Cancellation of repeat dispensing prescriptions following deduction

For whatever the reason, when a patient leaves the responsibility of a GP practice, for clinical safety reasons, outstanding issues of electronic repeat dispensing prescriptions must be cancelled. Without doing this there is a risk of authorisation and issue of duplicated medication leading to potential patient harm.

All electronic repeat dispensing prescriptions for the patient that are still within their legal validity timeframe must be cancelled via the EPS on the first occurrence of either of these trigger points;

1. on receipt of a GP2GP Request that is accepted by the system where it will fulfil the request and generate an 'EHR_extract' response.

2. on acceptance of a deduction transaction received from a local NHIAS system, or via a manual high security deduction.

Cancellation must be via the 'Cancel Request' EPS message and the system must handle the appropriate response message(s) in line with the EPS requirements. The 'Cancellation Reason' vocabulary has been extended within the DMS for this purpose with two new reason codes;

Cancellation Reason (Assigned OID: 2.16.840.1.113883.2.1.3.2.4.16.27)

Code	Description
0008	Patient deducted - other reason
0009	Patient deducted - registered with new practice

When the cancellation request process is triggered by the system, without a current smartcard authenticated user, the 'author' and 'responsibleParty' information within the EPS 'Cancel Request' message must still be populated with valid SDS credentials. The minimum data is a user's smartcard UID and the organisation ODS code. The System can be configured with a user's smartcard UID for use in such cases, for example the senior partner's smartcard UID or any other user who has cancellation RBAC access rights, provided the user agrees for their credentials to be used for this purpose.

Based on successful or unsuccessful cancellation response(s), the local record must be updated to record which electronic repeat dispensing authorisations have been cancelled. The local record should be updated to record cancelled repeat dispensing issues, as per existing EPS requirements.

Any post-dated electronic prescriptions for the patient that are still queued for submission to the EPS must also be deleted with the PMR updated to show the prescription was not issued.

The prescriber must be informed of prescriptions that have been automatically cancelled or deleted after this process.

When triggered by a GP2GP Request, the generation of the EHR_extract must occur after the local record has been updated, but not exceeding the time limits defined by the GP2GP requirements i.e.20 minutes. In the event of a failure of cancellation of repeat dispensing or post-dated prescriptions, the EHR-extract should be generated without waiting for that failure to be resolved

This process must be fully automated without requiring human intervention.

6.16.3 Prescribing Data Migration and Cancellation

GPSoC contracted suppliers will be aware of the 'Data Migration Specification' (NPFIT-PC-PMG-DEL-0020).

Within a system change data migration process, the out-going system supplier must include the ***minimum*** following EPS data within data migration extracts for the in-coming system supplier.

- Prescription ID
- Prescription Message UUID

- Prescribed date (including queued post-dated prescriptions)
- Patient NHS number
- Prescriber / Signer Name
- Nominated dispenser ODS code (if nominated)
- For each prescribed medication item;
    - Medication item UUID
    - Medication dm+d name
    - Medication dm+d code
    - Prescribed quantity (included representation in words for Schedule 2/3 controlled drugs)
    - Prescribed unit of measure (text and dm+d code)
    - Dosage instructions
    - Additional patient or dispenser instructions
    - Prescriber endorsements
    - Cancellation date (if cancelled)
- For repeat prescribing prescriptions;
    - Number of authorised issues
    - Number of authorised issues remaining
    - Review date
- For repeat dispensing prescriptions;
    - Number of authorised issues
    - Issue duration

The in-coming system supplier must ensure their System can submit a cancellation request interaction, handle cancellation responses, or print a prescription token, for a prescription that was created and issued by the out-going System, where the details of the prescription were included in a data migration extract.

Ref	Requirement
6.16.1	The System must be capable of creating and sending a prescription "Cancel Request" HL7 message. The reason for cancellation must be provided by the prescriber.
6.16.2	The System must allow for cancellation of both an individual prescription item and a complete prescription that has been sent to the Spine.
6.16.3	The System must be capable of receiving a "Cancel Response" message, within both the "Cancel Response" and "Subsequent Cancellation Response" interactions. The System must identify which prescription, or item, is affected and take appropriate actions. For unsuccessful cancellations, the System must notify the user of the reason for the unsuccessful cancellation.
6.16.4	When a cancellation is unsuccessful due to the prescription already being with a dispenser, the System must provide the user with the contact details for the dispenser. These details are contained within the cancellation response message.

Ref	Requirement
6.16.5	The System must alert the user that a cancellation response has not been received from the Spine if a cancellation response message has not been received after pre-defined period of time since the cancellation request was submitted. This period of time should be a system parameter to allow for system behaviour to align with typical response times for asynchronous messaging within the live environment. Within this alert the user must be informed to assume the cancellation process was unsuccessful and that manual means to cancel the prescription must be undertaken (e.g. contacting the patient).
6.16.6	Where the user requesting the cancellation is the same as who electronically signed the prescription then the author and responsible party details are identical and contain the credentials of the user. Where the user requesting the cancellation is different to the user who electronically signed the prescription, then the author is populated with the credentials of the requesting user. The responsible party is populated with the credentials of the user who electronically signed the prescription. The MIM states the "person.id" data attribute must be populated with an "SDS identifier". For the "Cancel Request" message this must be the unique SDS identifier for the user, not any other code or identifier held within SDS for that user.
6.16.7	All electronic repeat dispensing prescriptions for the patient that are still within their legal validity timeframe must be cancelled via the EPS, and post-dated electronic prescriptions for the patient that are still queued for submission to the EPS must be deleted, on the first occurrence of either of these trigger points; 1. On receipt of a GP2GP Request that is accepted by the system where it will fulfil the request and generate an EHR_extract response. 2. On acceptance of a deduction transaction received from a local NHIAS system, or via a manual high security deduction. The cancellation message must be submitted and response(s) processed as per section 6.16.2 within this specification. The prescriber must be informed of prescriptions that have been automatically cancelled or deleted after this process.

Ref	Requirement
6.16.8	Within a system change data migration process, the out-going system supplier must include the EPS data as specified in section 6.16.3 of this specification within data migration extracts for the in-coming system supplier.
6.16.9	Within a system change data migration process, the in-coming system supplier must ensure their System can submit a cancellation request interaction, handle cancellation responses, or print a prescription token, for a prescription that was created and issued by the out-going System, where the details of the prescription were included in a received data migration extract.
6.16.10	Systems must without exception make cancellation functionality available to all users who are able to prepare or sign EPS prescriptions in accordance with Authority's National RBAC Database.

6.17 Personal Administration

Section removed.

6.18 Protocol Supply

Section removed.

6.19 Update Semantics

In cases where the clinician has made an error to a prescription or wishes to update a prescription, they must cancel that prescription and re-issue another prescription.

It is not possible to undo a cancellation request message. In such cases the cancellation would remain and the clinician would need to issue a new replacement prescription.

6.20 Reporting and Information Requirements

This section defines reports and/or information that must be obtainable from within the system to support day-to-day processes within the practice in response to queries about prescriptions, from patients, pharmacists or other parties.

6.20.1 Electronic Prescriptions Report

The System must be able to generate a report in a machine readable file format, for example to view as a spreadsheet, for all EPS R2 electronic prescriptions generated by the practice within a given date/time range. Such a report must be available to end

users to generate and use. The output must contain the following ***minimum*** information;

- Prescription ID
- Patient NHS Number
- Patient Name
- Patient Date of Birth
- Prescription Authorisation Date/Time
- Prescription Submission Date/Time
- Prescription Treatment Type (Acute, Repeat or Repeat Dispensing)

6.20.2 'Active' Repeat Dispensing Prescriptions Report

The System must be able to generate a report in a machine readable file format, for example to view as a spreadsheet, on currently active repeat dispensing prescriptions issued by the practice. Such a report must be available to end users to generate and use. The definition of 'active' should be based on the following algorithm.

```
Today's Date < Prescription Date + (Number of Authorised Issues *
Expected Duration)
```

For example;

```
Today's Date = 23/01/2013

Prescription Date = 10/11/2012

Number of Authorised Issues = 6

Expected Duration (of each issue) = 28 days

Thus;

23/01/2013 < 10/11/2012 + (6*28 days)

= 23/01/2013 < 27/04/2013

= True
```

For each repeat dispensing prescription that is identified as active, the output must contain the following ***minimum*** information;

- Prescription ID
- Patient NHS Number
- Patient Name
- Patient Date of Birth
- Prescription Authorisation Date
- Number of Authorised Issues
- Expected Duration (of each issue in days)

6.20.3 Prescriptions Awaiting Electronic Signing

The System should include a default/entry screen visible to a prescriber when they open the system to indicate that prescriptions are waiting to be electronically signed and additionally how many prescriptions are outstanding.

This may mitigate the risk of a prescriber missing and delaying the signing of a prescription, which may result in delay for the patient having their medication dispensed.

6.20.4 Prescription Workflow/Status Visibility

The current status of a prescription, in relation to EPS workflow, must be visible to the end user. The following workflow statuses, using either the terms defined below or equivalents currently in use within the System, must include at least the following;

- Awaiting signing by prescriber
- Post-dated and submitted to the EPS
- Submitted to the EPS
- Rejected by the EPS
- Cancelled
- Cancellation rejected by the EPS

Ref	Requirement
6.20.1	The System must be able to report on electronic prescriptions generated by the practice, as per section 6.20.1 within this specification.
6.20.2	The System must be able to report on currently active repeat dispensing prescriptions issued by the practice, as per section 6.20.2 within this specification.
6.20.3	Requirement removed.
6.20.4	The System should include a default/entry screen visible to a prescriber when they open the system to indicate that prescriptions are waiting to be electronically signed and additionally how many prescriptions are outstanding.
6.20.5	The current status of a prescription, in relation to EPS workflow, must be visible to the end user, as per section 6.20.5 within this specification. Cancellation rejected by the EPS

6.21 Disaster Recovery

This section has been removed pending confirmation of the requirements.

6.22 DMS 3.4.0

Section removed.

~~The Domain Message Specification (DMS) 3.4.0 is published on TRUD (https://isd.hscic.gov.uk).~~

6.22.1 Dispensing Event Interactions

~~**Note**. At the time of writing the three interactions related this section will not be supported by the EPS. Suppliers will be notified when the timescale for implementation of these interactions is agreed.~~

~~Prescribing system end-points will be configurable to receive three new HL7 interactions;~~

- ~~Forward Dispense Notification (PORX_IN000001GB01)~~
- ~~Forward Dispenser Withdraw To Prescriber (PORX_IN000008GB01)~~
- ~~Forward Rebuild Dispense History To Prescriber (PORX_IN000009GB01)~~

~~These will be asynchronous interactions triggered by an EPS dispensing event, or amendment to a dispensing event, against a prescription that was submitted by the prescribing system, using the ASID as the system identifier.~~

~~The purpose of these interactions is to provide prescribers with visibility of dispensing events.~~

~~A possible future requirement is to include dispensing information within Summary Care Record updates. Specific requirements related to the Summary Care Report will be published by the Summary Care Record programme.~~

6.22.2 Delayed Prescribing

~~The EPS supports the NHS England Antimicrobial Resistance (AMR) agenda by allowing the prescriber to prescribe a "Delayed Prescription". A delayed prescription is akin to an acute prescription with an optional delayed start (akin to a post-dated prescription) and an optional constrained end date. The EPS enforces that no dispensing events can be recorded outside the start and end dates defined by the prescriber.~~

~~A delayed prescription is identified using a new vocabulary entry for the "PrescriptionTreatmentType"; 0004 "Delayed Prescribing".~~

~~The 'effectiveTime' attribute within the "DaysSupply" entity defines the valid dispensing period for the prescription. The 'low.value' must not be before the start date for the prescription and must not be after the legal expiry date for the medication item. The 'high.value' must not be before the 'low.value' and must not be after the expiry date for the medication item. The System must use a default value for the 'high.value' of 28 days after the 'low.value', which the end-user must be able to change if desired.~~

~~All delayed prescribing prescriptions must be created as non-nominated prescriptions, even if the patient has a nominated dispenser and wants to use it. This is because the purpose of a delayed prescription is only for use if the patient requires it.~~

~~A means for the patient to obtain the Prescription ID for a delayed prescription must be confirmed at the time of prescribing. In many cases this will be through the printing of a prescription token but alternative mechanisms for a patient to identify their electronic prescriptions will be available to support EPS Phase 4 operations. If there is no record that the patient has signed up to an alternative mechanism, then the printing of a prescription token for a delayed prescription must be automatic.~~

Ref	Requirement
6.21.1	Requirement removed ~~The system must implement the Parent Prescription PORX_IN020101GB01 interaction defined in the DMS~~.
6.21.2	Requirement removed ~~The system must support receipt of the Forward Dispense Notification (PORX_IN000001GB01) interaction that will be sent to the prescribing system each time a dispensing event occurs against a prescription that was submitted by the prescribing system, using the ASID as the system identifier.~~
6.21.3	Requirement removed ~~The system must support receipt of the Forward Dispenser Withdraw To Prescriber (PORX_IN000008GB01) interaction that will be sent to the prescribing system each time a dispensing event is withdrawn against a prescription that was submitted by the prescribing system, using the ASID as the system identifier.~~
6.21.4	Requirement removed ~~The system must support receipt of the Forward Rebuild Dispense History To Prescriber (PORX_IN000009GB01) interaction that will be sent to the prescribing system each time a rebuild dispense history event occurs against a prescription that was submitted by the prescribing system, using the ASID as the system identifier~~
6.21.5	Requirement removed ~~On receipt of a Forward Dispense Notification interaction, the system must locate each medication item referenced within the interaction with the medication item issue within the local PMR.~~ ~~For the purposes of these requirements, located records will be termed as "matched medication items".~~

Ref	Requirement
6.21.6	Requirement removed ~~For each matched medication item the system must store the following data items from the Forward Dispense Notification interaction;~~ ~~• Date/time of the dispensing event~~ ~~• Dispensing status of the medication item as per the "ItemStatus" vocabulary~~ ~~• Dispensed dm+d description~~ ~~• Dispensed quantity~~ ~~• Item non dispensing reason~~ ~~• Dispensing organisation ODS code~~
6.21.7	Requirement removed ~~For each matched medication item the system may store any or all of the following data items from the Forward Dispense Notification interaction;~~ ~~• Dispenser name~~ ~~• Dispenser address~~ ~~• Dispenser contact details~~ ~~• Dispensing organisation name~~ ~~• Dispensing organisation address~~ ~~• Dispensing organisation contact details~~ ~~• Supply instructions~~ ~~• Additional dispenser instructions~~
6.21.8	Requirement removed ~~The PMR user interface screen where medication item issues are viewed must display at least the date and status of the dispensing event where this information has been received and stored by the system.~~ ~~User interface designers should consider if any additional dispensing information presented here has value or may clutter the screen.~~
6.21.9	Requirement removed ~~Additional dispensing data not visible from a medication item screen must be visible elsewhere within the user interface.~~ ~~For example, within a prescription dispensing information details screen.~~

Ref	Requirement
6.21.10	Requirement removed ~~On receipt of a Forward Dispenser Withdraw To Prescriber interaction, the system must locate the data that was updated within the local PMR from the referenced Dispense Notification and undo / rollback these updates.~~
6.21.11	Requirement removed ~~On receipt of a Forward Rebuild Dispense History To Prescriber interaction, the system must locate all the dispensing data associated with the prescription issue and replace it with the dispensing data contained within the received interaction.~~
6.21.12	Requirement removed ~~The system must not directly alert the user on receipt of Forward Dispense Notification, Forward Dispenser Withdraw To Prescriber or Forward Rebuild Dispense History To Prescriber interactions.~~
6.21.13	Requirement removed ~~Processing of received Forward Dispense Notification, Forward Dispenser Withdraw To Prescriber or Forward Rebuild Dispense History To Prescriber interactions must be a background task without need for user intervention.~~
6.21.14	Requirement removed ~~The System must allow the user to prescribe a "delayed prescription" using the "PrescriptionTreatmentType" vocabulary defined within the DMS~~
6.21.15	Requirement removed ~~When a delayed prescription is authored, the System must populate the 'effectiveTime' attribute within the "DaysSupply" entity to define the valid dispensing period for the prescription.~~ ~~The 'low.value' must not be before the start date for the prescription and must not be after the legal expiry date for the medication item.~~ ~~The 'high.value' must not be before the 'low.value' and must not be after the expiry date for the medication item.~~
6.21.16	Requirement removed ~~When a delayed prescription is authored, the System must use a default value for the 'DaysSupply/effectiveTime/high.value' of 28 days after the 'DaysSupply/effectiveTime/low.value', which the end user must be able to change if desired.~~

Ref	Requirement
6.21.17	Requirement removed ~~The System must create all delayed prescriptions as non-nominated prescriptions, even if the patient has a nominated dispenser and wishes to use it.~~
6.21.18	Requirement removed ~~The System must ensure that a means for the patient to obtain the Prescription ID for a delayed prescription must be confirmed at the time of prescribing. In many cases this will be through the printing of a prescription token but alternative mechanisms for a patient to identify their electronic prescriptions will be available to support EPS Phase 4 operations. If there is no record that the patient has signed up to an alternative mechanism, then the printing of a prescription token for a delayed prescription must be automatic.~~

Appendix A: Vocabularies maintained outside the MIM - PrescriptionType

Appendix removed. Now published within the NHSBSA Overprint Specification.

Appendix B: Vocabularies maintained outside the MIM - PrescriberEndorsement

Appendix removed. Now published within the NHSBSA Requirements and Guidance for Endorsement.

Appendix C: Format for Prescriber, Practice/Cost Centre, CCG, NHS Trust, NHS Trust Site and Provider codes

Appendix removed. Now published within the NHSBSA Overprint Specification.

Appendix D: Cross reference of "Prescription Type" code and prescriber codes

Appendix removed. Now published within the NHSBSA Overprint Specification.

Appendix E: Cross reference of EPS "Prescription Type" code and FP10 "Paper Type" and Prescriber Initiative

Appendix removed. Now published within the NHSBSA Overprint Specification.

Appendix F: Prescriber Term Descriptions

Term / Acronym	Data Dictionary Definition	Synonyms	Format & Syntax	Prescribing Use	Additional Use / Notes
Doctors Index Number (DIN)	If a doctor chooses to enter general practice in England or Wales, a 6-digit number is allocated by the DH (now IC)	PPD id PPA id PPA number NCN (National Code Number) National Code GP identification number. Prescribing/prescriber number	6 numeric digits Syntax = NNNNNN	GP's primary prescribing code. On prescription pad next to name. **Note**: A locum doctor would usually use the DIN of the GP that they are providing locum services for unless there are no GPs left at the practice when the authorised signatory would need to apply for a spurious code from the NHS BSA.	SDS stored as 'Person' nhsGMP Exeter Systems for patient registration Only one person registered at each practice has any given DIN code.
General Medical Practitioner (GMP)	The DOCTOR INDEX NUMBER (DIN) is passed to the NHSBSA, which adds a leading character and a check digit to create the GENERAL MEDICAL PRACTITIONER (GMP) PPD CODE	GMP GNC	As per DIN plus prefixed with a G and suffixed with a check digit	**None**	SDS stored as 'OrgPerson' nhsGNC' The NHSBSA do not use GMP GMP sent to ODS team GMP is used in patient registration where GP has a patient list- used to identify that list in PDS
Spurious Prescriber Codes	In addition to a DIN code a GP may have one or more spurious GP codes. These are allocated if a GP works in additional general practices. The spurious GP codes are **not derived from the DIN** but do follow the same format as the DIN code and are allocated by the NHSBSA.	PPA ID PPD ID Prescribing/prescriber number	6 numeric digits beginning 6 Syntax = 6NNNNN **Note**: "Pooled List" codes, which must never be used for a prescription, have a similar format but beginning with "7".	Additional codes allocated by the NHSBSA to GP's who work in more than one practice and their DIN is already in use at a practice. A spurious code may also be allocated to a special exercise or initiative eg Dermatology centre, Hospice where prescribing data is not required at individual prescriber level.	Refer to the NHSBSA website for use of spurious codes[7]

[7] http://www.nhsbsa.nhs.uk/PrescriptionServices/3973.aspx

Term / Acronym	Data Dictionary Definition	Synonyms	Format & Syntax	Prescribing Use	Additional Use / Notes
General Medical Council (GMC)	A code uniquely identifying a general medical practitioner **Note**: GMC is the governing body. All doctors receive a GMC number upon qualifying.	None	7 numeric digits Syntax = NNNNNNN	None	SDS stored as 'Person' nhsGMC – not all because GMC does not supply a feed to SDS. Only one person registered at each practice has any given GMC code.
Nursing and Midwifery Council (NMC)	None	None	Practice or Community Nurse code 2 numeric + 1 alpha + 4 numeric + 1 alpha Syntax = NNANNNNA	Nurse prescribers prescribing code	Only one person registered at each practice has any given NMC code.
General Pharmaceutical Council (GPhC)	None	None	Pharmacist GPhC 7 numeric with 1st digit being 2 Syntax = 2NNNNNN	Pharmacist prescribers prescribing code	These codes replace RPSGB codes as from 27th September 2010.
Health & Care Professions Council (HCPC)	None	None	2 alpha prefix + 5 numeric pre-padded with 0 (zero) characters to make the code 8 characters long. Syntax = AANNNNN Podiatrist/Chiropodist prefix = "CH" Physiotherapist prefix = "PH" Radiographer prefix = "RA" Dietician prefix = "DT" e.g. CH001234	Podiatrist/Chiropodist, Physiotherapist, Dietician and Radiographer prescribers	
Optometrists (GOC)	None	None	2 alpha + "-" + 5 or 6 numeric Syntax = NN-NNNNN(N)	Optometrist prescribers	

