

**Electronic Transmission of Prescriptions  
Nomination Web Services Requirements Specification  
for System Suppliers**

**Amendment History:**

Version	Date	Amendment History
0.1	23 <sup>rd</sup> March 2007	First draft for comment
0.2	1 <sup>th</sup> June	Updates per review cycle
0.3	15 <sup>th</sup> June	Updates per review cycle
0.4	17 <sup>th</sup> July	Updates per review cycle
1.0	31/07/07	Version 0.4 Approved by TD
1.1	29/11/07	Non functional modification to search criteria on name and address and rationalisation of exception codes.
1.2	24/11/17	Section 3.3 updated for environment information. Plus minor changes elsewhere.

**Forecast Changes:**

Anticipated Change	When
None	

**Reviewers:**

This document must be reviewed by the following. Indicate any delegation for sign off.

Name	Signature	Title / Responsibility	Date	Version
Ian Lowry		ETP Programme Manager	31/07/07	0.4
Rob Gooch		Senior Technical Architect	24/11/17	1.2
David Little		Technical Architect NHS.UK	31/07/07	0.4

**Approvals:**

This document requires the following approvals:

Name	Signature	Title / Responsibility	Date	Version
Tim Donohoe		ETP Programme Director	31/07/07	1.0
Rob Gooch		Senior Technical Architect	24/11/17	1.2

**Distribution:**

For issue to system suppliers who will be developing GP and dispensing systems for use in ETP Release 2

**Document Status:**

This is a controlled document.

This document version is only valid at the time it is retrieved from controlled filestore, after which a new approved version will replace it.

On receipt of a new issue, please destroy all previous issues (unless a specified earlier issue is baselined for use throughout the programme).

**Related Documents:**

These documents will provide additional information.

Ref no	Doc Reference Number	Title	Version
1	NPFIT-SHR-QMS-PRP-0015	Glossary of Terms Consolidated.doc	
2	NPFIT-ETP-EDB-0075	An Introduction to the Nomination Process	

**Glossary of Terms:**

List any new terms created in this document. Mail the NPO Quality Manager to have these included in the master glossary above [1].

Term	Acronym	Definition

---

## Contents

1.	Purpose.....	5
2.	Background.....	5
3.	Requirements.....	5
3.1.	Scope .....	5
3.2.	Connection to the web services .....	7
3.3.	Web Services URL .....	7
3.4.	Authentication.....	7
3.5.	Connection protocol and authentication details .....	<b>Error! Bookmark not defined.</b>
3.6.	Services Available .....	7
3.7.	Data Vocabulary.....	15
3.8.	Error Handling and exception throwing .....	17
4.	Service Data Definition .....	18
4.1.	Description of the WDSL File .....	18
4.2.	Description of the XML Schema (Dispensers.xsd) .....	18

## 1. Purpose

The purpose of this document is to inform the external system suppliers of the intended use of the NHS UK Web Services functionality and the technical details required to integrate their systems to the services.

Enquiries about the contents of this document should be sent to the email address: [epssupport@nhs.net](mailto:epssupport@nhs.net)

## 2. Background

For background information on the nomination process, please see NPFIT-ETP-EDB-0075 – “An introduction to the Nomination Process”

## 3. Requirements

### 3.1. Scope

The following table shows the actions that can be performed by the various types of ETP systems.

	<b>GP</b>			<b>Pharmacy</b>			<b>Healthspace</b>			<b>Dispensing Doctor</b>		
	Create	Modify	Remove	Create	Modify	Remove	Create	Modify	Remove	Create	Modify	Remove
<b>Primary Contractor</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>Appliance Contractor</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>Dispensing Doctor Contractor</b>			✓			✓			✓	✓		✓

Ref	Requirement
280.3.1.1	With the patients consent, GP Systems must be able to create, modify and remove patient nominations for primary contractors (Community Pharmacies) and Appliance contractors. GP Systems must also be able to remove nominations against a patients Dispensing Doctor contractor if the patient gives consent.
280.3.1.2.	With the patients consent, Pharmacy Systems must be able to create, modify and remove patient nominations for primary contractors (Community Pharmacies) and Appliance contractors. Pharmacy Systems must also be able to remove nominations against a patients Dispensing Doctor contractor if the patient give

	consent.
280.3.1.3.	With the patients consent, Dispensing Doctor Systems must be able to create, modify and remove patient nominations for primary contractors (Community Pharmacies) and Appliance contractors. Dispensing Doctor Systems must also be able to remove nominations against dispensing doctors and set Dispensing Doctor nominations against their own practice only (again only with patient consent)

### 3.1.1. Validating the NACS code of the dispensary to be nominated

Ref	Requirement
280.3.1.4	If a patients nomination is being created in-situ (i.e. by the dispensing system at the site being nominated) then the dispensing system must not validate the NACS code of that site using the NHS UK web services. The NACS code and services offered (i.e. community pharmacy/ appliance contractor or dispensing doctor) used in the PDS update must be retrieved from the configuration settings of that dispensing system and not be manually entered by the user. <i>(for a dispensing system to be able to create nominations for a patient, the system must already be Release 2 accredited hence the system/ site will be able to process nominations)</i>
280.3.1.5	If a system allows for a user to directly enter a NACS code to create a nomination, this NACS code must be verified by the GetDispenserByNacsCode service each time a nomination is created to ensure the site is enabled for nomination and provides the contractor type required for the nomination.
280.3.1.6	If a system provides functionality to 'cache' a list of commonly chosen dispensaries, then the NACS code of the selected dispensary must be verified by the GetDispenserByNacsCode service each time a nomination is created to ensure the site is enabled for nomination and provides the contractor type required for the nomination.
280.3.1.7	GP Systems must provide the functionality to search for dispensaries. The searches that must be used are GetDispenserByNearest, GetDispenserByName and GetDispenserByNameAndLocation
280.3.1.8	Pharmacy Systems must provide the functionality to search for dispensaries. The searches that must be used are GetDispenserByNearest, GetDispenserByName and GetDispenserByNameAndLocation
280.3.1.9	If a search is carried out by GetDispenserByNearest, GetDispenserByName or GetDispenserByNameAndLocation, the system must not then validate any chosen NACS code using the GetDispenserByNacsCode service – all relevant information will have been returned by the search.

### 3.2. Connection to the web services

Connection to the web services will be via SOAP messages via either the Internet or N3 network.

### 3.3. Web Services URL

Connection to the NHS UK web services will be via a standard URL for all environments, e.g. live, development and test. The NHS UK web services provide read-only access to non-sensitive information, thus the one resource can be used for all development and operational purposes.

It is intended that in the live environment the URL will remain constant in perpetuity. However, to cater for unforeseen changes it is advised that system suppliers make this a configurable parameter in their systems rather than a hard coded value. In addition – this will allow for reconfiguration of the system to connect to development or compliance testing environments.

Ref	Requirement
280.3.3.1	System suppliers must store the URL in their systems as a configurable parameter.

The location of the NHS UK web services is;

<http://nww.etpwebservices.cfh.nhs.uk/ETPWebServices/>

Whilst this resource uses the “nww” notation, it is available over the Internet. Details of the location of the service.asmx, WSDL and XML Schema can be found on the above web site.

### 3.4. Authentication

There will be no authentication required to access the web services as the data contained in the services is already in the public domain.

Ref	Requirement
280.3.5.1	Connection to the web services will be made via SOAP
280.3.5.2	All users of nomination web services will connect to the same URL.

### 3.5. Services Available

Four procedures will be available within the web services suite in order to request the necessary dispenser data for nominations. The services are as follows;

- GetDispenserByNearest

- GetDispenserByName
- GetDispenserByNameAndLocation
- GetDispenserByNacsCode

Three of the services (GetDispenserByNearest, GetDispenserByName, and GetDispenserByNameAndLocation) are intended to allow a search to be performed by the user returning dispensaries that meet the search criteria.

The fourth service (GetDispenserByNacsCode) is intended as a validation service. For example, if we assume that an external system provides the functionality to store the 'top 10' pharmacies in the area local to a given site, this service must be used to validate that the site to be nominated is of the correct contractor type and the site is capable of processing release 2 nominated prescriptions. Additionally, if a system allows a user to type in a NACS code of a site to be nominated, then this method must be used to validate the site is as expected (e.g. name and location) and that it is capable of processing release 2 nominated prescriptions for the required contractor type.

Ref	Requirement
280.3.6.1	Searches performed on input parameters for the four procedures will be performed on a case insensitive basis. I.e. a search for "abc" will return "ABC", "Abc", "ABc" etc. This will apply to all textual input parameters (e.g. address and postcode elements, organisation names, NACS codes and EPS flags).

Unless otherwise specified the parameters for the service are mandated.

### 3.5.1. GetDispenserByNearest

Ref	Requirement	
280.3.6.2	Procedure name: GetDispenserByNearest	
	Parameters:	
	strFullPostCode	Full postcode to search on
	intServiceType	The service type to search for (i.e. Community or Appliance)
	strEps	Retrieve EPS enabled/disabled dispensers (YES/ NO) – The default value will be YES

	<b>Description:</b>	<p>This method retrieves the 25 nearest pharmacies/ appliance contractors to the supplied postcode and the service type/ EPS status chosen. All textual input parameters will be located on a case insensitive basis.</p>
	<b>Returns:</b>	<p>The following is a summary of the returned data. For full specification details see section 4.</p> <ul style="list-style-type: none"> <li>• Dispensing Site NACS Code</li> <li>• Dispensing Site Name</li> <li>• Dispensing Site contact details (telephone &amp; fax)</li> <li>• Dispensing Site Address and postcode</li> <li>• Distance from supplied postcode</li> </ul>
	<b>Order</b>	<p>The results will be ordered by distance from the supplied postcode with the nearest appearing first in the list.</p>

**3.5.2. GetDispenserByNameAndLocation**

280.3.6.3	Procedure name:	GetDispenserByNameAndLocation		
	Parameters:	strOrganisationName	The name of the pharmacy to search on (e.g. Coens).	
	Please Note: The address fields submitted must be in one of the following formats: [street AND town AND part postcode] or [street AND town] or [street and part postcode] or [town] or [part postcode]	strStreet	Street Name	
		strTown	Name of town to search	
		strPartPostCode	First Part of a valid postcode to search on	
		intServiceType	The service type to search for (i.e. Community Pharmacy or Appliance)	
		strEps	Retrieve EPS enabled/ disabled dispensers (YES/ NO) – The default value will be YES	
		All textual input parameters will be located on a case insensitive basis.		

	<p><b>Description:</b></p>	<p>This method retrieves upto 25 pharmacies/ Appliance contractors in the address/post code specified that have a name containing the text entered as the search string and the service type/ EPS status chosen.</p> <p>This search will match on either the part postcode or town (if both are supplied the part postcode will be used). Please note that this search will match against the town name or part postcode. For example, if a part postcode of LS1 is entered, the search will only return dispensaries within LS1, no dispensaries in surrounding postcodes will be returned even if there are less than 25 in the supplied part postcode.</p> <p>The name match will be based on any part of the stored name. For example, a search for “Coens” should return “Coens Plc” and “Coens Pharmacy” and “The Coens Chemist”</p> <p>Searches on street name will also be based on locating the supplied search string in the relevant database column. For example a search for street name “Aire road” will match against “5 Aire road”, “Aire Road” but not “5 Aire Rd”</p>
	<p><b>Returns:</b></p>	<p>The following is a summary of the returned data. For full specification details see section 4.</p> <ul style="list-style-type: none"> <li>• Dispensing Site NACS Code</li> <li>• Dispensing Site Name</li> <li>• Dispensing Site contact details (telephone &amp; fax)</li> <li>• Dispensing Site Address and postcode</li> <li>• Distance from supplied postcode</li> </ul>
	<p><b>Order</b></p>	<p>The results will not be provided in any specific order</p>

**3.5.3. GetDispenserByName**

280.3.6.4	Procedure name:	GetDispenserByName	
	Parameters:	strOrganisationName	The name of the pharmacy to search on (e.g. Boots).
		intServiceType	The service type to search for (i.e. Community Pharmacy or Appliance Contractor)
		strEps	Retrieve EPS enabled/ disabled dispensers (YES/ NO) – The default value will be YES
	All textual input parameters will be located on a case insensitive basis.		
Description:	<p>This method retrieves upto 25 pharmacies/ Appliance contractors with a name containing the text entered as the search string and the service type/ EPS status chosen.</p> <p>The name match should be based on any part of the stored name. For example, a search for “Coens” should return “Coens Plc”, “Coens Pharmacy” and “The Coens Chemist”</p> <p>This is not a geographical search and should return any dispensaries within England that meet the name criteria.</p> <p>It is required to allow searches on a non geographical basis – i.e. name only for virtual pharmacies or appliance contractors</p>		

	Returns:	The following is a summary of the returned data. For full specification details see section 4. <ul style="list-style-type: none"><li>• Dispensing Site NACS Code</li><li>• Dispensing Site Name</li><li>• Dispensing Site contact details (telephone &amp; fax)</li><li>• Dispensing Site Address and postcode</li></ul>
	Order	The results will be ordered alphabetically using the dispensary name.

**3.5.4. GetDispenserByNACSCode**

280.3.6.5	Procedure name:	GetDispenserByNACSCode
	Parameters:	strNACSCode Valid NACS Code (e.g. FLH84)
	Description:	<p>Occasionally the end user may not wish to search for a dispenser as the NACS code of a local pharmacy may already be known. This procedure is used to validate that the NACS code entered by the end user is valid.</p> <p>It returns pertinent information about the dispenser to allow the end user to validate that the NACS code relates to the dispenser they intended. The information returned will include whether the dispenser is EPS enabled.</p> <p>This procedure will only return organisations registered as dispensers (i.e. if a valid NACS code is supplied but it is not registered as a dispenser, then no data will be returned in the XML document).</p> <p>Please note, a NACS code (for a hospital, GP, etc.) entered will raise an error of NACS_CODE_WRONG_FORMAT (it is not formatted like a pharmacy NACS code), or NACS_CODE_NOT_RECOGNISED (it is of the right format for pharmacy NACS code but it is not a pharmacy NACS code in the database – i.e. it does not exist.)</p>

	Returns:	<p>The following is a summary of the returned data. For full specification details see section 4.</p> <ul style="list-style-type: none"> <li>• Dispensing Site NACS Code</li> <li>• EPS status</li> <li>• Service Type(s)</li> <li>• Dispensing Site Name</li> <li>• Dispensing Site contact details (telephone &amp; fax)</li> <li>• Dispensing Site Address and postcode</li> </ul>
--	----------	---

NB. The ability to select non EPS enabled dispensers via the methods above is to allow end users to perform a “sanity check” that a given dispenser is identified within the system but is not EPS enabled.

Ref	Requirement
280.3.6.6	It is a requirement on end user systems that when non EPS dispensers are requested by a client application (for a sanity check), the user will NOT be able to select one of those dispensers for nomination.

### 3.6. Data Vocabulary

The type definition and allowable values for each of the parameters in the procedures above is as follows:

Ref	Requirement			
280.3.7.1	Parameter Name	Type	Allowable values	Description
	intServiceType	Integer	“1” “2”	1 = Community 2 = Appliance
	strFullPostCode	String	Any alphanumeric upto 8 characters	
	strOrganisationName	String	Any alphanumeric up to 250	

			characters	
	strStreet	String	Any alphanumeric upto 50 characters	
	strTown	String	Any alphanumeric upto 50 characters	
	strPartPostCode	String	Any alphanumeric upto 4 characters	Likely users will enter 3 or 4 characters
	strEPS	String	“YES” “NO”	“YES” = Retrieve only EPS enabled dispensers “NO” = Retrieve only dispensers who are not EPS enabled.
	strNACSCode	String	5 character alpha numeric	Any valid NACS code e.g. FLH84

Please note that for the name search which includes the parameters street, town and part postcode, there are various combinations of these fields that can be submitted, they do not ALL need to be submitted in the same request.

Ref	Requirement
280.3.7.2	The allowable combinations for addresses are as follows;  [street AND town AND part postcode] or [street AND town] or [street and part postcode] or [town]

	<p>or</p> <p>[part postcode]</p>
--	----------------------------------

### 3.7. Error Handling and exception throwing

An error returned by SOAP will be a fault containing the error information.

Ref	Requirement
280.3.8.1	In the event of an error occurring, clients will receive a SOAP exception which can then be handled accordingly in the client application.

An example of a returned error is as follows;

```
System.Web.Services.Protocols.SoapException:
FULL_POSTCODE_WRONG_LENGTH
  at Service.GetDispenserByNearest(String strfullpostcode, Int32 intservicetype, String
streps) ...
```

The actual error message in this example is "FULL\_POSTCODE\_WRONG\_LENGTH". All errors are in this uppercase-underscore format.

#### 3.7.1. Error Codes

Ref	Requirement
280.3.8.2	<p>The following is a list of all error codes that can be returned (should be self-explanatory).</p> <p>They describe problems with the fields (arguments, parameters) passed to the operations.</p> <pre>MISSING_FULL_POSTCODE, PART_POSTCODE_WRONG_LENGTH FULL_POSTCODE_WRONG_LENGTH PART_POSTCODE_WRONG_FORMAT FULL_POSTCODE_WRONG_FORMAT POSTCODE_NOT_IN_ENGLAND UNKNOWN_POSTCODE INVALID_EPS_FIELD INVALID_SERVICETYPE_FIELD NO_FIELDS NO_LOCATION_FIELDS NO_ORGANISATION_NAME NO_DISPENSERS_FOUND NEED_MORE_THAN_STREET_FIELD NACS_CODE_WRONG_FORMAT NACS_CODE_NOT_RECOGNISED NACS_CODE_MISSING ORGANISATION_NAME_TOO_LONG STREET_NAME_TOO_LONG TOWN_NAME_TOO_LONG</pre>

	<p>A special error message which may occur in the event of a service exception (e.g. database is unavailable) is:</p> <p>FATAL_WEBSERVICE_ERROR</p> <p>This error is received when something erroneous occurs with the Web Service itself. CfH will log the full details of these errors and monitor them so that faults can be rectified quickly. Please ensure that if this FATAL_WEBSERVICE_ERROR is noted, it is reported to the CfH helpdesk. If the web service application layer itself is down (e.g. server unavailable) then a web service connection error will occur.</p>
--	--

## 4. Service Data Definition

The following schema fragment identifies the returned data type for the 4 services identified in Section 2.

### 4.1. Description of the WSDL File

Attached below is a copy of the WSDL file used within the web services (However, please note that the URI's will change)



D:\Documents and Settings\jowh1\My D

### 4.2. Description of the XML Schema (Dispensers.xsd)

This is the structure of the XML containing the dispenser information.



D:\Documents and Settings\jowh1\My D

The elements and attributes are as follows:

#### 4.2.1. Elements

Name	Description	Values	Parent	Maximum	Minimum
Dispensers	The root element. Contains 1 to unbounded Dispenser elements				
Dispenser	Represents a dispenser. Several attributes to give dispenser details. Has 0 or up to 2 ServiceType elements.		Dispensers	Unbounded	1
ServiceType	Indicates the service type of the dispenser.	Community or Appliance	Dispenser	2	0

#### 4.2.2. Attributes

Name	Description	Values	Element
searchType	Indicates the type of search conducted.	One of the following (string, required): DISPENSER_BY_NAME STREET PARTPOSTCODE	Dispensers

		DISPENSER_BY_NAME_STREET_TOWN DISPENSER_BY_NEAREST DISPENSER_BY_NAME DISPENSER_BY_NACS DISPENSER_BY_NAME_TOWN, DISPENSER_BY_NAME_PARTPOSTCODE	
cachedAt	The date and time this data was cached.	String. Required.	Dispensers
organisationCode	The NACS code of the dispenser.	String. Required.	Dispenser
name	The name of the dispenser.	String. Required.	Dispenser
telephone	The telephone number of the dispenser.	String. Optional.	Dispenser
fax	The fax number of the dispenser.	String. Optional.	Dispenser
street	The street of the dispenser.	String. Required.	Dispenser
locality	The locality of the dispenser.	String. Optional.	Dispenser
town	The town of the dispenser.	String. Optional.	Dispenser
administrative	The administrative area of the dispenser.	String. Optional.	Dispenser
postcode	The full postcode of the dispenser.	String. Required.	Dispenser
Eps	The EPS status of the dispenser.	String. Optional. "True" or "False".	Dispenser

Please note that although locality, town, and administrative are optional, at least one of them will contain an address value.