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## GP2GP R2.2

# Spine Technical Design

**Amendment History:**

Issue No.	Version	Date	Amendment History
01	0.1	24/11/03	First draft for comment
02	0.2	02/12/04	Confirmed SDS use for GP to Practice lookup, removed LRS Checks
03	1.0	06/12/04	Document Baselined and Issued
04	1.1	13/01/05	Included content regarding Smartcard options, SDS traversal and Future enhancements
05	2.0	29/06/05	Phase 1.0 – Approved
06	2.1	12/08/05	Phase 1.1 – Draft for comment
07	2.2	29/09/05	Phase 1.1 – First Release
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09	2.4	19/12/05	Phase 1.1 – Introduction of Safe Exchange Framework and elaboration of section 7.5 Special Behaviours
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11	3.0	14/02/06	Approved
12	3.1	3/8/07	Initial Draft for v1.1A Issued for review Changes include:- Added Section <b>Error! Reference source not found.</b> to explain the scope of 1.1A. Updated Reviewers and Approvers Updated section 7.1 SEF solution. Early adopters of GP2GP implemented an enhanced version of SEF. The approach taken by the suppliers is being adopted as the standard going forward. Updated section 7.1 to include new requirement regarding which version number to use for the SEF rules. Removed references to GP2GP Business Process Model – this has now be incorporated into the requirements documentation.
13	3.2	18/9/2006	Updated after review – Issued for Approval Updated section 7.1 to address comments regarding which version number to use for the SEF rules.
14	4.0	25/10/2007	Updated to approved following review
15	4.1	9/11/2007	Draft Updated for version 2.0 of GP2GP See section for 1 detail of V2.0 changes. All changes are marked with a tag “[V2]”.
16	4.2	10/12/2007	Updated after external review.
17	4.3	21/12/2007	Minor updates after final review Issued for approval.
18	5.0	21/12/2007	Approved subject to project board approval.

19	5.1	6/2/2008	Minor updates to address comments raised by project board. These include minor updates to the core ABA requirement (section <b>Error! Reference source not found.</b> ) to live service reports to reiterate that transfer reports have to be held at practice level ( <b>Error! Reference source not found.</b> ). In addition the time to live section was corrected (Section 7.1) and the error messages text simplified ( section <b>Error! Reference source not found.</b> ).
20	6.0	17/11/2008	Additional Content raising Specification to 2.1 Including A-B-A Functionality
21	6.1	17/12/2009	Additional Appendix (I) for Large Messaging via Common Content Messages to support Specification 2.2
22	6.2	02/02/2010	Amended post 3 <sup>rd</sup> GP2GP workshop and Supplier feedback on 2.2 Spec.
23	7.0	28-Jan-2011	Updated to reflect updates to 2.2 specifications from informal reviews.
23	7.0	18 Feb 2011	For Approval
24	7.1	13 Feb 2014	Updated to reflect 2.2 specification updates.

**Reviewers:**

This document must be reviewed by the following.

Name	Title / Responsibility	Date	Version
Danny Soloman	ESP Information Governance		
	SDS Team		
	PDS Team		
Tim Tett	GP Core Solution Architect		
Graham Adams	Design Authority – Spine		

**Approvals:**

This document requires the following approvals.

Name	Signature	Title	Date of Issue	Version
Mike Curtis		GPSoc / ESP Lead Architect – Design Authority		

**Document Status**

This is a controlled document which is only valid on the day it was printed.

**Related Documents**

These documents will provide additional information.

Ref	Doc Reference Number	Title	Version
1	HSCIC-PC-BLD-0068	GP2GP R2.2 Requirements Specification	
2	NPFIT-PC-BLD-0172	Use Case 1: Transfer electronic healthcare record	
3	NPFIT-PC-BLD-0173	Use Case 2: Transfer and analyse management information	
4	NPFIT-FNT-TO-TIN-0289	Supp Spec: Handling attachment types	
5	NPFIT-FNT-TO-TIN-1087	Supp Spec: Handling medication discontinuation	
6	NPFIT-PC-BLD-0132	Supp Spec: Structured degrade handling	
7	NPFIT-PC-BLD-0133	Supp Spec: Handling and propagation of non-consultation data	
8	NPFIT-PC-BLD-0134	Supp Spec: Representing PMIP result data in GP2GP messages	
9	NPFIT-PC-BLD-0158	Supp Spec: Attachment references	
10	NPFIT-PC-BLD-0163	Supp Spec: Topic and category handling in GP2GP	
11	NPFIT-PC-BLD-0175	Supp Spec: Handling A-B-A transfers	
12	Placeholder	Supp Spec: Handling archetypes	
13	NPFIT-PC-BLD-0170	Supp Spec: Handling large messages	
14	NPFIT-PC-BLD-0178	Supp Spec: Coding Scheme Translation	
15	NPFIT-PC-BLD-0171	Supp Spec: Harvesting management information	
16	NPFIT-PC-BLD-0174	Supp Spec: Processing management information	
17	NPFIT-PC-BLD-0178	Supp Spec: Coding Scheme Translations	
18	NPFIT-PC-BLD-0083	GP2GP Response Codes	
19	NPFIT-PC-BLD-0069.21	GP2GP Spine Technical Design	
20	NPFIT-FNT-TO-TAR-0017.7	Compliance Requirements for Patient Registration	
21	NPFIT-FNT-TO-IG-DES-0115	Statement on Data Retention	
22	NPFIT-PC-BLD-0177	Supp Spec: User Experience	
23	NPFIT-PC-BLD-0181.01	Supplementary Specification: Handling the Patient Facing Services	
24	HSCIC-FNT-TO-TAR-0095.02	Messaging – Attachment Types	

### 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 Ref [1]

Term	Acronym	Definition
A-B-A	A-B-A	EHR integration scenario where the requesting primary care system already has a pre-existing record for the patient, but the patient has subsequently been a permanent patient at a different primary health care provider. (See appendix 2)
Accredited System ID	ASID	Reference to a single instance of supplier software in a non hosted environment, where services (e.g. GP2GP) can be enabled or disabled. In a hosted environment this definition breaks down as a single instance of supplier software supports multiple practices (NACS) some of which may require GP2GP to be disabled (e.g. lack of training).
Access Control System	ACS	The Spine system that supports the Access Control Framework which records patient's preferences/consent values relating to the Summary Care Record
Common Point to Point Messaging	-	Point to point messaging service across TMS designed to forward unspecified messages. Used to support the Large Messaging Protocol.
Data Transfer Service	DTS	Point to many, "mail box" orientated messaging service across N3 network designed to forward unspecified messages. Separate from TMS.
Electronic Healthcare Record	EHR	A record of a patient's primary care transferred between primary care organisations using the GP2GP solution.
EHR Extract	-	The extracted information from a patient's old GP practice electronic patient record that is to be sent to the patient's new GP practice.
EHR Request	-	The message sent by the Requesting system to the Sending system requesting the EHR Extract
EHR Extract Message		The MIM message containing 'EHR Extract'
Electronic Patient Record	EPR	A patient's primary care record held electronically within a primary care system.
Message Implementation Manual	MIM	The reference that defines the message patterns, schemas and content of the GP2GP messages used in GP2GP.
	MIM 3	Specifically version 3.1.10 of the MIM that defines the messages used in GP2GP baseline 1.1a and 2.2a.
	MIM 7	Defines the Common Point 2 Point messages introduced in 2.2a for the Large Messaging requirements bundle.
Domain Message Specification	DMS	The reference that defines the message patterns, schemas and messages used in GP2GP baseline 2.2c
	DMS 1	Specifically version 1.0 of the DMS for GP2GP that defines the messages used in GP2GP baseline 2.2c. This supersedes the MIM 7 messages.

Term	Acronym	Definition
Organisation Data Service	ODS	ODS codes (formerly NACS codes) provide a unique identifier for any organisational entity providing NHS services, whether a trust, PCT, a hospital, a ward within a hospital, a treatment centre or mobile unit.
Personal Demographic Service	PDS	The Spine sub-system that stores patient demographic data.
Requesting System		The system that requests an EHR Extract, i.e. the system of the patient's new practice.
Safe Exchange Framework	SEF	Message filtering service that can inhibit messages between suppliers / software / versions. Allows central shut down of specific GP2GP interactions in the event of (clinical safety) problems.
Sending System		The system that sends an EHR Extract, i.e. the system of the patient's old practice.
Common Point to Point	P2P	A MIM 7 message without any defined HL7 content and thus can be used to convey any content. In the context of GP2GP this is used to carry one or more parts of an EHR Extract (including attachments, compressed files)
Inbox		A logical view of the received EHR Requests and EHR Extracts within the main system, i.e. a business view and not a MHS view.
Outbox		A logical view of the EHR Requests and EHR Extracts waiting to be sent within the main system, i.e. a business view and not a MHS view. (NB This would normally be empty unless there is an issue preventing the Extract from being sent)
Sent Items		A logical view of the sent EHR Requests and EHR Extract messages within the main system, i.e. a business view and not a MHS view.
Internal Transfer		A patient registers with a General Practice surgery that shares a single patient database with the patient's previous General Practice surgery, previously known as 'Single Instance Database'.
Workflow Manager		In the context of GP2GP this is a logical concept representing a facility within the main GP system application that allows actions or task associated to the processing of an EHR Request, an EHR Extract or an associated GP2GP Paper Transfer Process to be assigned to users (manually or automatically) and for the user to mark them as completed once they have been carried out.
Single Instance Database		See 'Internal Transfer'

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## 1 Introduction

This document defines the Spine Interface Technical Design for the GP2GP Release 2.2 Requirements Specification and specifies the Spine interface requirements for Requesting and Sending systems and describes the functions performed by the Spine when supporting these systems.

For the purposes of completeness, this document also includes information on recording Management Information at key points to aid in Spine messaging diagnostics.

Many of the sections covered in previous editions of this document have been moved into separate specification documents – see the R2.2 Requirements Specification NPFIT-PC-BLD-0068.

Before reading this document, read the GP2GP R2.2 Requirements Specification [Ref: 1] and the other supplementary specifications. This document focuses on any and all aspects of solutions that require an interaction with the Spine, predominantly message interfaces to TMS and LDAP queries to SDS but with some mention of SSB and PDS interactions. It identifies the responsibilities of Requesting and Sending systems, and Spine sub-systems.

The Appendices provide further detail about the architecture of the solution space and external factors that have influenced or affected the design.

## 2 Overview of the GP2GP Solution

This section provides a summary view of the architecture of a typical GP2GP solution and provides a suitable reference point which will be referred to elsewhere in the document.

The GP2GP R2.2 requirements support the electronic transfer of a patient's Electronic Health Record between organisations, typically GP Practices, which provide Primary Care services to patients.

The solution architecture is reliant on the use of PDS, SDS, SSB and TMS spine services and as such is only available to systems of NHS organisations in England.

Technically the model is peer-to-peer with GP Systems being responsible for the majority of the work in transferring the records. The Spine is responsible for (a) providing reference data to associate patients with their GP Practice held on PDS, (b) providing network addressing and messaging behaviour properties from SDS for routing messages across TMS, and (c) providing a security framework governed by SSB.

The major high level steps within the solution are as follows:

1. Confirm the identity of the patient and their previous GP practice
2. Discover details of the previous Practice's system capabilities and identities, e.g.. does it support GP2GP messaging
3. Carry out a messaging conversation to request and subsequently receive the patient's EHR Extract from their previous Practice
4. Integrate the newly received EHR Extract into the system whilst alerting users of any data items that need to be manually verified or re-activated.

The main sections of this document will expand upon steps 1 to 3 above.

### 2.1 Overview Diagram

The following diagram shows the high-level system interactions necessary within the GP2GP R2.2 Solution:

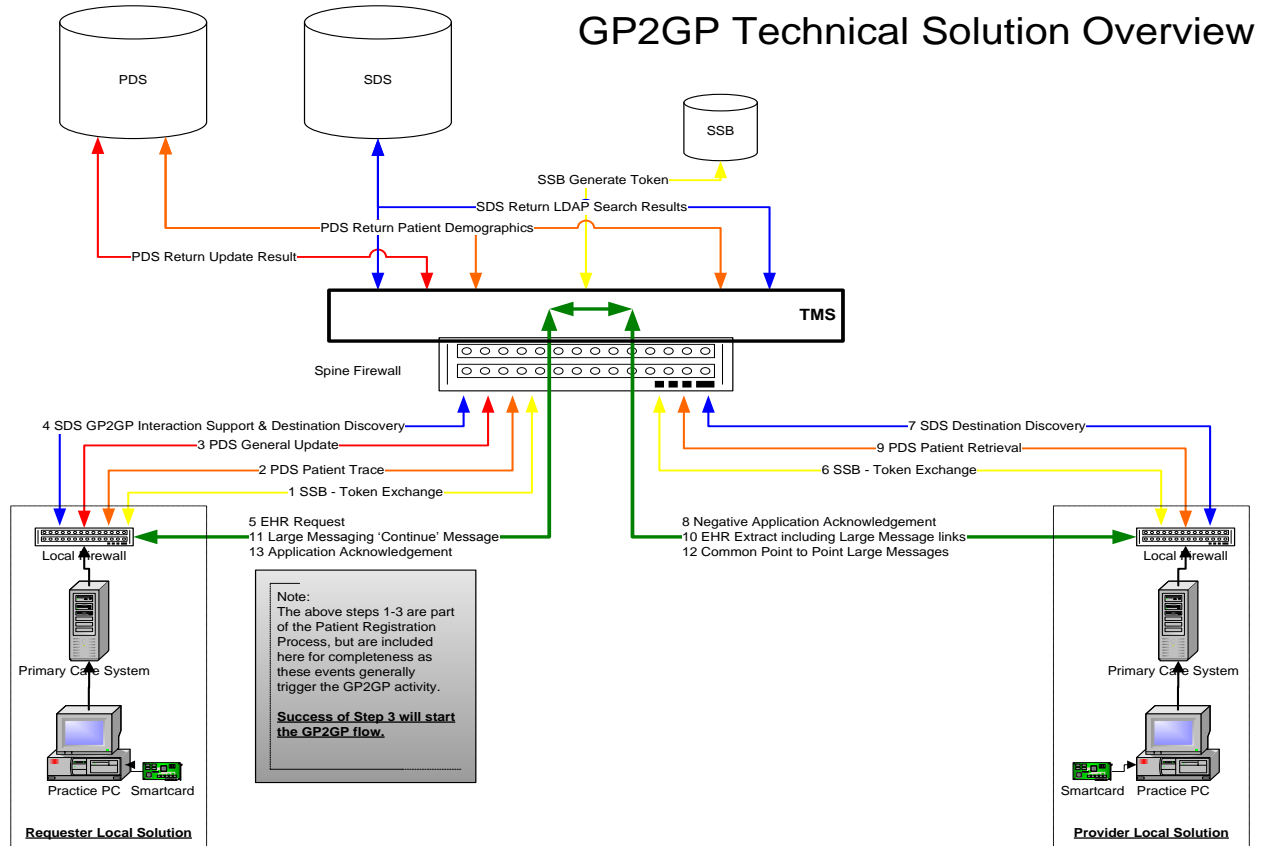


Figure 1 - Technical Solution Overview for R2.2

## 2.2 Basic Message Flow Diagram

PS

Figure 2 - Basic Flow of the GP2GP Transfer process in R2.2

### 3 Overview of System Responsibilities

The following sections outlines the systems that form the overall solution and are directly involved in system interactions.

#### 3.1 Spine Security Broker

This sub-system of the Spine is responsible for NHS Smartcard authentication, issue of user credentials (e.g. roles and business activities) via SAML assertions and managing user sessions.

The GP2GP process requires access controls within systems to be aligned with the national RBAC database and in accordance with specific GP2GP business activities specified in GP2GP R2.2 Requirements Specification [Ref: 1].

It is now mandatory for a user processing patient permanent registrations to be authenticated with an NHS Smartcard when GP2GP is enabled to prevent unnecessary failures to initiate the GP2GP transfer process.

#### 3.2 Patient Demographics Service (PDS)

As part of the patient registration process, GP2GP requires Requesting systems to trace patients on PDS using the recommended Tracing Algorithm detailed in Appendix B. This mandates the use of the PDS Advanced Trace message at appropriate points – it is not permitted to exclude the PDS Advanced Trace from the tracing functionality. Once successfully traced the patient record is then updated with their new Healthcare Provider (e.g. GP Practice). All other functions relating to patient registrations, e.g. messages to/from NHAIS systems, are unaffected by GP2GP.

A successful response (i.e. a PDS General Update Success message) to a PDS General Update to update the patient's Healthcare Provider will trigger the GP2GP process.

The PDS is used by both Requesting and Sending systems as follows:

- Requesting system – Finding the patient on PDS, retrieving and storing the patient's current Practice code from PDS and updating the Practice code to that of the registering practice (Requesting system).
- Sending system - Checking that the patient is registered here, retrieving the (recently updated) Healthcare Provider (GP Practice) code from PDS and the code of the Requesting practice from SDS (see below) and checking that the two codes match.

Note: PDS data was updated in 2008 to hold national GP Practice codes rather than registered GP practitioner against each patient to reflect the 2004 change in the way patients register with Practices.

#### 3.3 Spine Directory Service (SDS)

The SDS is used to verify the patient's current General Practice supports GP2GP interactions, provides contract properties for each of the messages and the links between a Practice Code, an

Accredited System Identifier and a Message Handling System objects for addressing. This can be broken down as follows:

- Providing verification of support for GP2GP MIM 3 interactions
- Providing verification of support for GP2GP DMS 1 interactions
- Providing verification of support for Common Point to Point MIM 7 interactions
- Providing the TMS Addressing Information and Service Bindings for the Accredited System and Message Handling Systems that support the Requesting and Sending systems.
- Providing ebXML contract properties to control the behaviour of the Sending system

### **3.4 Requesting and Sending Systems**

The Requesting and Sending systems are the systems that support the patient's old and new General Practices. They are:

- Providing the local security framework aligned with IG requirements.
- Providing integration with the NHS Smartcards aligned with RBAC
- Providing an interface to the Spine Services (PDS, TMS, SDS, etc.).
- Accessing the Local Patient Index (LPI).
- Facilitating the Business Rules and Workflow through local functionality.
- Performing messaging to other GP systems via TMS.
- Providing Management Information reports regarding the use and outcomes of all GP2GP Transfers.

#### **3.4.1 Requesting system**

The Requesting system is the GP System that has recently registered someone as a permanent patient for primary healthcare medical services provision and is now requesting a transfer of the Patient's Electronic Patient Record as an EHR Extract from their previous provider.

#### **3.4.2 Sending system**

The Sending system is the GP System that holds the patient's current Electronic Patient Record (EPR) at the start of the process, and which supports the General Practice where the patient was previously registered. It provides the new practice with the EHR Extract from the EPR.

#### **3.4.3 Management Information**

Note that where Management Information fields and values have been placed throughout this requirements document, they are to indicate values for consistency across systems in particular circumstances. These should not be interpreted as the only values or a minimum set to complete.

## 4 General Requirements

Req ID	Requirement Text	Priority
TD01	Both Requesting and Sending systems <b>shall</b> comply with the PDS Compliance Baseline currently agreed with the Authority by the supplier. Any exceptions are set out in this document and supersede the PDS Compliance Baseline e.g. recommended Tracing Algorithm.	MUST

## 5 Requesting System Responsibilities

This section details the technical steps required to support the GP2GP process as the Requesting system following a new patient registration. There are a number of steps invoking interactions with Spine services that are required to support the patient registration and electronic transfer of the patient's Electronic Patient Record (EPR) as outlined below.

The Requesting system must:

- Step 1: Determine whether the patient is a returning patient (i.e. has been previously registered on the system and has an existing (old) EPR by checking whether the patient record is present in the Local Patient Index
- Step 2: Trace the patient on PDS using the recommended tracing algorithm
- Step 3: Retrieve and store the patient's previous General Practice details from PDS
- Step 4: Synchronise the local patient record with the PDS record
- Step 5: Update the patient's previous General Practice on PDS to that of the Requesting system
- Step 6: Check the patient's previous General Practice supports GP2GP and what functionality by querying the practice's ASID entry on SDS
- Step 7: Retrieve addressing information and contract properties for the GP2GP message interactions by querying the Message Handling Service entry on SDS for the previous General Practice
- Step 8: Send an EHR Request message to the patient's previous General Practice
- Step 9: Receive responses to the EHR Request from the Sending system. i.e. Application Acknowledgement, and/or EHR Extract and where appropriate Common Point to Point messages..
- Step 10: Process a successfully received EHR Extract

### 5.1 Interaction Diagram

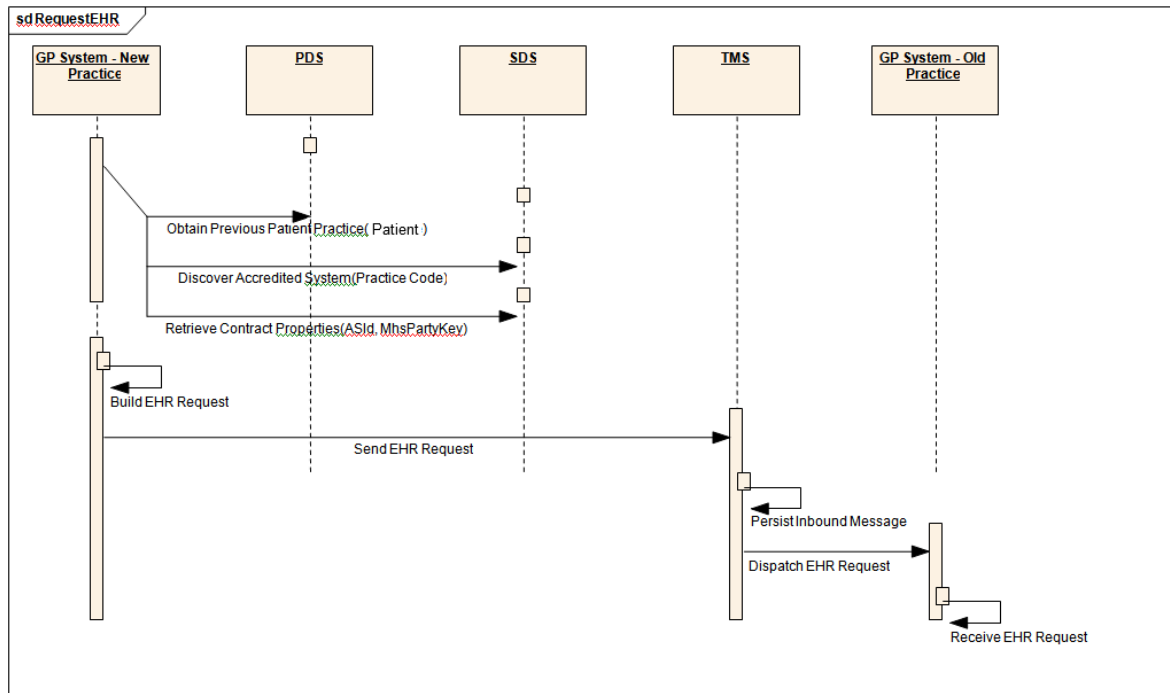


Figure 3 - Interaction Diagram for an EHR Request

### 5.2 Step 1: Returning Patient?

The Requesting system searches the Local Patient Index for the patient and, if present, it is a Returning Patient scenario.

Req ID	Requirement Text	Priority
TD02	The system <b>shall</b> search the Local Patient Index to determine whether the new patient being registered is already present in the system and if true, it is a Returning Patient scenario. . The user options at the point of integration / rejection have been significantly reduced in this version of GP2GP, but this does not affect the technical messaging solution.	MUST

### 5.3 Step 2: Tracing the Patient

The Requesting system must search PDS for the patient using the recommended PDS Tracing Algorithm (see Appendix B). The Tracing Algorithm also specifies which messages are to be used, what data items are to be populated and when a user is prompted to refine the search parameters.

Systems may deviate from the recommended algorithm if the tracing algorithm used by the system has been agreed by both the Demographics and GP2GP programmes within the Authority.



### 5.3.1 Successful Trace

The trace will be considered to be successful where a unique match is returned and the patient record can be updated (i.e. it is not 'sensitive')

### 5.3.2 Unsuccessful Trace

If the PDS query fails or the record cannot be updated (e.g. i.e. because the record is sensitive) the GP2GP process must END.

Note: The system may allocate a new record to PDS if all tracing attempts fail. If the system supports allocation and this option is selected the GP2GP process must also END.

Req ID	Requirement Text	Priority
TD03	<p>The system <b>shall</b> attempt to trace the patient on PDS using the recommended tracing algorithm documented in Appendix B. If the patient cannot be traced on PDS the GP2GP Transfer process <b>shall</b> END.</p> <p>Any deviation from the recommended PDS Tracing Algorithm <b>shall</b> be agreed with the Demographics and GP2GP programmes within the Authority.</p>	MUST

## 5.4 Step 3: Retrieve and store Previous GP Practice

The system must store the patient's previous GP code. The system must use this code to retrieve other practice details from SDS, namely the Practice Name, Address including Post Code and contact details (e.g. telephone number).

Req ID	Requirement Text	Priority
TD04	<p>Once the patient has been traced on PDS the system <b>shall</b> either store the patient's previous practice code from the data returned from PDS during the tracing process or (recommended) <b>shall</b> perform a PDS Retrieval to obtain the patient's previous practice code. Consult Appendix B for the values to store.</p> <p>If the previous Practice code is null the GP2GP Transfer process <b>shall</b> END.</p> <p>Note that during tracing and, if requested, from a PDS Retrieval, the data returned from PDS may include historical data. The system <b>shall</b> therefore ensure that it obtains the current value of the patient's practice code.</p>	MUST

Req ID	Requirement Text	Priority
TD05	<p>Once the patient's previous Practice code has been obtained (and is not null) the system <b>shall</b> perform the following LDAP query to obtain further details about the Practice:</p> <pre>ldapsearch -h ldap.spine.nhs.uk -b "ou=organisations, o=nhs" "(&amp;(nhsIDCode=P83020)(objectClass=nhsGPPpractice))" o, postaladdress, postalcode, telephonenumber</pre> <p>Note: Carriage returns are indicative of formatting of this document.</p> <p>The Requesting system <b>shall</b> replace the nhsIDCode parameter value (highlighted in green above) in the LDAP query with the ODS code stored for the patient's previous Health Care Provider.</p> <p>If the Requesting system needs to utilise a different query, the supplier <b>shall</b> obtain permission to do this from the Authority, specifically consulting the GP2GP programme.</p>	MUST
TD06	<p>If the LDAP Query returns 1 result the system <b>shall</b> record the following information about the previous Practice:</p> <ul style="list-style-type: none"> <li>'o' = practice name</li> <li>'postaladdress' = address</li> <li>'postalcode' = post code</li> <li>'telephonenumber' = telephone number</li> </ul>	MUST
TD07	<p>If the LDAP Query fails or returns 0 or 2 or more results the system <b>shall</b> not store any further details about the previous Practice.</p>	

## 5.5 Step 4:- Synchronise the Local and PDS Records

The system must synchronise the local record and the PDS record by allowing the user to see side-by-side all differences between the two records and to select which data items to keep (As per the PDS Compliance synchronisation requirements).

NB. In this context the 'local' record is either a new record being created for this registration or an existing record if this is a returning patient.

Req ID	Requirement Text	Priority
TD08	At the end of the Tracing process the system <b>shall</b> perform a PDS Retrieval to obtain all the necessary data needed to synchronise the local record (that already exists if the patient is already present in the local patient index or the new data items being added as part of the registration process) with the record on PDS.	MUST
TD09	<p>The synchronisation process <b>shall</b> follow the requirements in the PDS Compliance Baseline – Synchronisation document (see PDS Baseline Index for the version of PDS compliance supported). It is noted that the PDS synchronisation requirements have evolved over time and the earlier versions may not provide the required specificity needed to support patient registrations and therefore the following requirement <b>shall</b> be adhered to:</p> <p>The system <b>shall</b> allow the user to view the PDS data items and to decide of a field by field basis which data items to keep, i.e. the locally entered data item or a PDS data item. This should ideally be done using a split screen facility that shows both sets of data side-by-side and allows the user to select (e.g. by use of check boxes) which item to keep.</p> <p>Note that although the patient may have provided details of their previous practice there is no requirement to check that this matches that held on PDS – the system will send the EHR Request message to the practice indicated on PDS irrespective of the information provided by the patient and the user <b>shall</b> not be given the option to abort the GP2GP transfer process based on this information.</p>	

## 5.6 Step 5:- Update PDS

Once the user has made their synchronisation selection the system must update PDS including setting the Healthcare Provider from Primary Care Services to the code of the patient's new practice. Note that this is the only time that the system can update the patient's Healthcare Provider – as a result of a new registration. Systems must not update this field at any other time.

### 5.6.1 PDS General Update response

Note that the PDS update interaction is an asynchronous transaction and the system must wait until either a PDS Successful Update Response or an Application Acknowledgement is received in response.

On receiving a PDS Successful Update Response the GP2GP Transfer process is triggered.

If an Application Acknowledgement is received indicating a failure to update PDS, the GP2GP Transfer must not be triggered.

---

Req ID	Requirement Text	Priority
TD10	The Requesting system <i>shall</i> send a PDS General Update message to change the patient's current General Practice ODS code and supplies the date.	MUST

## 5.7 Step 6: Determining support for GP2GP

The Requesting system must check that the Sending system supports GP2GP EHR Transfers before sending an EHR Request message. This check requires two LDAP queries to SDS:

- To confirm that the Accredited System object in SDS for the previous Practice (Sending system) supports the GP2GP EHR Request messages either in MIM3 or MIM3 and DMS1 formats.
- To retrieve the ebXML message contract properties from the Message Handling System object in SDS associated with the previous Practice's (Sending system) Accredited System Identifier (ASID).

### 5.7.1 Querying SDS for the previous Practice's Accredited System details

The GP Practice Code (ODS code) will be used as the filter value in order to locate the associated Accredited System Identifier (ASID). Valid responses to this query will contain 1 result and is discussed in more detail in the table below. Responses containing 0 or more than 1 result or technical errors are regarded as failures and the GP2GP Transfer process must END.

Req ID	Requirement Text	Priority												
TD12	<p>If the patient's previous Practice code (Health Care Provider value) was not empty, the Requesting system <b>shall</b> query SDS using this LDAP query (or equivalent from local search engine):</p> <pre>ldapsearch -h ldap.spine.nhs.uk -b "ou=services, o=nhs" "&amp;(nhsIDCode=P83020)(objectClass=nhsAs) ( (nhsASvcIA=urn:nhs:names:services:gp2gp:RCMR_IN010000UK05) (nhsASvcIA=urn:nhs:names:services:gp2gp:RCMR_IN010000UK06)))" uniqueIdentifier nhsMhsPartyKey nhsASSvcIA</pre> <p>Note: Carriage returns are indicative of formatting of this document.</p> <p>The Requesting system <b>shall</b> replace the nhsIDCode parameter value in the LDAP query with the ODS code stored for the patient's previous Health Care Provider.</p> <p>If the Requesting system needs to utilise a different query, the supplier <b>shall</b> obtain permission to do this from the Authority, specifically consulting the GP2GP programme.</p>	MUST												
TD12.1	<p>If an error occurs when querying SDS, the Requesting system <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>• Inform the user that GP2GP is not possible due to a Spine issue</li> <li>• Record the error in the system audit trail</li> <li>• End the GP2GP transfer process</li> <li>• Record Management Information as follows:</li> </ul> <table border="1" data-bbox="284 1485 1225 1839"> <thead> <tr> <th data-bbox="284 1485 754 1541">Field name</th> <th data-bbox="754 1485 1225 1541">Value</th> </tr> </thead> <tbody> <tr> <td data-bbox="284 1541 754 1592">Process failure point (RR8)</td> <td data-bbox="754 1541 1225 1592">40</td> </tr> <tr> <td data-bbox="284 1592 754 1644">Failure point Date/time (RR9)</td> <td data-bbox="754 1592 1225 1644">Current date and time</td> </tr> <tr> <td data-bbox="284 1644 754 1695">Failure type (RR11)</td> <td data-bbox="754 1644 1225 1695">0</td> </tr> <tr> <td data-bbox="284 1695 754 1747">Error code (RR12)</td> <td data-bbox="754 1695 1225 1747">20</td> </tr> <tr> <td data-bbox="284 1747 754 1839">Error description (RR13)</td> <td data-bbox="754 1747 1225 1839">Insert the response text from Response code 20</td> </tr> </tbody> </table>	Field name	Value	Process failure point (RR8)	40	Failure point Date/time (RR9)	Current date and time	Failure type (RR11)	0	Error code (RR12)	20	Error description (RR13)	Insert the response text from Response code 20	
Field name	Value													
Process failure point (RR8)	40													
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Failure type (RR11)	0													
Error code (RR12)	20													
Error description (RR13)	Insert the response text from Response code 20													

Req ID	Requirement Text	Priority												
TD12.2	<p>On receiving 0 results to the previously specified LDAP query, the Requesting system <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>• Inform the user that GP2GP is not possible as the patient's old practice doesn't support it</li> <li>• Record the error in the system audit trail</li> <li>• End the GP2GP transfer process</li> <li>• Record Management Information as follows:</li> </ul> <table border="1"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Process failure point (RR8)</td> <td>40</td> </tr> <tr> <td>Failure point Date/time (RR9)</td> <td>Current date and time</td> </tr> <tr> <td>Failure type (RR11)</td> <td>3 or 4 (depends on previous registration at the Requesting system)</td> </tr> </tbody> </table>	Field name	Value	Process failure point (RR8)	40	Failure point Date/time (RR9)	Current date and time	Failure type (RR11)	3 or 4 (depends on previous registration at the Requesting system)	MUST				
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Failure point Date/time (RR9)	Current date and time													
Failure type (RR11)	3 or 4 (depends on previous registration at the Requesting system)													
TD12.3	<p>If the LDAP query returns 1 result the Requesting system <b>shall</b> check if this contains the MIM 3 and the DMS 1 EHR Request interactions and take the appropriate action specified in the following 4 requirements.</p>	MUST												
TD12.4	<p>If the 1 result does NOT contain the MIM 3 interaction then the Requesting system <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>• The user will be informed that GP2GP cannot proceed due to a misconfiguration and that the GP2GP electronic transfer will not occur.</li> <li>• Record the error in the system audit trail</li> <li>• End the GP2GP transfer process</li> <li>• Record Management Information as follows:</li> </ul> <table border="1"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Process failure point (RR8)</td> <td>40</td> </tr> <tr> <td>Failure point Date/time (RR9)</td> <td>Current date and time</td> </tr> <tr> <td>Failure type (RR11)</td> <td>3</td> </tr> <tr> <td>Error code (RR12)</td> <td>24</td> </tr> <tr> <td>Error description (RR13)</td> <td>Insert the response text from Response code 24</td> </tr> </tbody> </table>	Field name	Value	Process failure point (RR8)	40	Failure point Date/time (RR9)	Current date and time	Failure type (RR11)	3	Error code (RR12)	24	Error description (RR13)	Insert the response text from Response code 24	MUST
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Process failure point (RR8)	40													
Failure point Date/time (RR9)	Current date and time													
Failure type (RR11)	3													
Error code (RR12)	24													
Error description (RR13)	Insert the response text from Response code 24													

Req ID	Requirement Text	Priority												
TD12.5	<p>If the 1 result contains the DMS 1 interaction ONLY then the Requesting system <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>The user will be informed that GP2GP cannot proceed due to a misconfiguration and that the GP2GP electronic transfer will not occur.</li> <li>Record the error in the system audit trail</li> <li>End the GP2GP transfer process</li> <li>Record Management Information as follows:</li> </ul> <table border="1"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Process failure point (RR8)</td> <td>40</td> </tr> <tr> <td>Failure point Date/time (RR9)</td> <td>Current date and time</td> </tr> <tr> <td>Failure type (RR11)</td> <td>3</td> </tr> <tr> <td>Error code (RR12)</td> <td>24</td> </tr> <tr> <td>Error description (RR13)</td> <td>Insert the response text from Response code 24</td> </tr> </tbody> </table>	Field name	Value	Process failure point (RR8)	40	Failure point Date/time (RR9)	Current date and time	Failure type (RR11)	3	Error code (RR12)	24	Error description (RR13)	Insert the response text from Response code 24	MUST
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Error description (RR13)	Insert the response text from Response code 24													
TD12.7	If the result contains the MIM 3 and DMS 1 interactions and the Requesting system DOES NOT support the DMS 1 message then the Requesting system <b>shall</b> move onto the next Step utilising the MIM 3 interaction.	MUST												
TD12.8	If the result contains the MIM 3 and DMS 1 interactions and the Requesting system DOES support the DMS 1 message then the Requesting system <b>shall</b> move onto the next Step utilising the DMS 1 interaction.	MUST												

Req ID	Requirement Text	Priority												
TD12.9	<p>If the LDAP query returns 2 or more results the Requesting system <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>• Inform the user that GP2GP is not possible due to a mis-configuration issue that has been recorded.</li> <li>• Record the error in the system audit trail</li> <li>• End the GP2GP transfer process</li> <li>• Record Management Information as follows:</li> </ul> <table border="1"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Process failure point (RR8)</td> <td>40</td> </tr> <tr> <td>Failure point Date/time (RR9)</td> <td>Current date and time</td> </tr> <tr> <td>Failure type (RR11)</td> <td>3 or 4 (depends on previous registration at the Requesting system)</td> </tr> <tr> <td>Error code (RR12)</td> <td>24</td> </tr> <tr> <td>Error description (RR13)</td> <td>Insert the response text from Response code 24</td> </tr> </tbody> </table>	Field name	Value	Process failure point (RR8)	40	Failure point Date/time (RR9)	Current date and time	Failure type (RR11)	3 or 4 (depends on previous registration at the Requesting system)	Error code (RR12)	24	Error description (RR13)	Insert the response text from Response code 24	MUST
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## 5.8 Step 7: Addressing and Creating the EHR Request

### 5.8.1 Step 7.1: Querying SDS for the previous Practice's Message Handling System details

When no error was generated in Step 6, the Requesting system will make a further LDAP query to discover the Contract Properties and service bindings for the GP2GP message interactions held in the Message Handling Service (MHS) associated with the Accredited System queried in Step 6. The `nhsMhsPartyKey` value retrieved in Step 6 must be used as the value for the `nhsMhsPartyKey` search.

The only valid response to this query is one result. If the response contains 0 or 2 or more results, or an error occurs it will not be possible to address the EHR Request and so the GP2GP Transfer process must END.



Req ID	Requirement Text	Priority
TD13	<p>On successful completion of the previous LDAP search against the Accredited System for the Sending system , the Requesting system <b>shall</b> query SDS using this LDAP query (or equivalent from local search engine) for the Message Handling System entry properties:</p> <pre>ldapsearch -h ldap.spine.nhs.uk -b "ou=services, o=nhs" "(&amp;(nhsMhsPartyKey=P83020-0005239) (objectClass=nhsMhs) (nhsMhsSvcIA=urn:nhs:names:services:gp2gp:RCMR_IN010000UK05))"</pre> <p><i>nhsMhsEndPoint nhsMhsIsAuthenticated</i>  <i>nhsMhsPersistduration nhsMhsRetries</i>  <i>nhsMhsRetryInterval nhsMhsSyncReplyMode</i>  <i>nhsMhsAckRequested nhsMhsDuplicateElimination</i>  <i>nhsMhsActor nhsMhsCPAId</i></p> <p>Note: Carriage returns are indicative of formatting of this document.</p> <p>The Requesting system <b>shall</b> replace the nhsMhsPartyKey parameter value in the LDAP query (in green highlight) with the value of the field retrieved in the previous query with the same name.</p> <p>The Requesting system <b>shall</b> replace the nhsMhsSvcIA parameter value in the LDAP query (in green highlight) with the value of the field retrieved in the previous query with the same name. (i.e. urn:nhs:names:services :gp2gp:RCMR_IN010000UK05 or urn:nhs:names:services :gp2gp:RCMR_IN010000UK06) as determined by the previous LDAP search.</p> <p>If the Requesting system needs to utilise a different query, the supplier <b>shall</b> obtain permission to do this from the Authority, specifically consulting the GP2GP programme.</p>	MUST

Req ID	Requirement Text	Priority												
TD13.1	<p>If an error occurs when querying SDS, the Requesting system <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>• Inform the user that GP2GP is not possible due to a Spine issue</li> <li>• Record the error in the system audit trail</li> <li>• End the GP2GP transfer process</li> <li>• Record Management Information as follows:</li> </ul> <table border="1"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Process failure point (RR8)</td> <td>50</td> </tr> <tr> <td>Failure point Date/time (RR9)</td> <td>Current date and time</td> </tr> <tr> <td>Failure type (RR11)</td> <td>0</td> </tr> <tr> <td>Error code (RR12)</td> <td>20</td> </tr> <tr> <td>Error description (RR13)</td> <td>Insert the response text from Response code 20</td> </tr> </tbody> </table>	Field name	Value	Process failure point (RR8)	50	Failure point Date/time (RR9)	Current date and time	Failure type (RR11)	0	Error code (RR12)	20	Error description (RR13)	Insert the response text from Response code 20	
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TD13.2	<p>If the LDAP query returns 0 results the Requesting system <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>• Inform the user that GP2GP is not possible due to a mis-configuration issue that has been recorded.</li> <li>• Record the error in the system audit trail</li> <li>• End the GP2GP transfer process</li> <li>• Record Management Information as follows:</li> </ul> <table border="1"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Process failure point (RR8)</td> <td>50</td> </tr> <tr> <td>Failure point Date/time (RR9)</td> <td>Current date and time</td> </tr> <tr> <td>Failure type (RR11)</td> <td>3 or 4 (depends on previous registration at the Requesting system)</td> </tr> <tr> <td>Error code (RR12)</td> <td>24</td> </tr> <tr> <td>Error description (RR13)</td> <td>Insert the response text from Response code 24</td> </tr> </tbody> </table>	Field name	Value	Process failure point (RR8)	50	Failure point Date/time (RR9)	Current date and time	Failure type (RR11)	3 or 4 (depends on previous registration at the Requesting system)	Error code (RR12)	24	Error description (RR13)	Insert the response text from Response code 24	MUST
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Failure type (RR11)	3 or 4 (depends on previous registration at the Requesting system)													
Error code (RR12)	24													
Error description (RR13)	Insert the response text from Response code 24													
TD13.3	<p>On receiving 1 result the Requesting system <b>shall</b> move onto creating the EHR Request message.</p>	MUST												

Req ID	Requirement Text	Priority												
TD13.4	<p>On receiving 2 or more results to the previously specified LDAP query, the Requesting system <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>• Inform the user that GP2GP is not possible due to a mis-configuration issue that has been recorded.</li> <li>• Record the error in the system audit trail</li> <li>• End the GP2GP transfer process</li> <li>• Record Management Information as follows:</li> </ul> <table border="1"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Process failure point (RR8)</td> <td>50</td> </tr> <tr> <td>Failure point Date/time (RR9)</td> <td>Current date and time</td> </tr> <tr> <td>Failure type (RR11)</td> <td>3 or 4 (depends on previous registration at the Requesting system)</td> </tr> <tr> <td>Error code (RR12)</td> <td>24</td> </tr> <tr> <td>Error description (RR13)</td> <td>Insert the response text from Response code 24</td> </tr> </tbody> </table>	Field name	Value	Process failure point (RR8)	50	Failure point Date/time (RR9)	Current date and time	Failure type (RR11)	3 or 4 (depends on previous registration at the Requesting system)	Error code (RR12)	24	Error description (RR13)	Insert the response text from Response code 24	MUST
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Error description (RR13)	Insert the response text from Response code 24													

### 5.8.2 Step 7.2: Creating the EHR Request

From a successful result in Step 7.1, the Requesting system will have the appropriate addressing information required to build the ebXML and HL7 headers for the appropriate EHR Request message.

The EHR Request will be validated by the Requesting system and then sent to the Multi-hop Intermediary Reliability (also known as 'Forward Reliable') channel of the Spine TMS. If TMS is unavailable, the Requesting system will retry sending according to the contract properties retrieved from SDS when TMS becomes available again.

Req ID	Requirement Text	Priority
TD14	<p>On successful completion of the previous LDAP search against the Message Handling System for the Sending system, the Requesting system <b>shall</b> create an EHR Request utilising the interaction from the highest MIM mutually supported (either MIM 3 or DMS 1) by both the Requesting system and the Sending system.</p> <p>Note that DMS 1 is the higher of the two MIMs as it replaces MIM 7.</p>	MUST

Req ID	Requirement Text	Priority												
TD15	<p>The Requesting system <b>shall</b> populate the EHR Request with the patient's NHS Number and ODS code of the Sending system as identified below:</p> <table border="1"> <thead> <tr> <th>Data Field</th> <th>Node path</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>NHS Number</td> <td>/ EhrRequest /patient /id/@extension</td> <td>Patient's stored NHS Number</td> </tr> <tr> <td>Previous Practice Code</td> <td>/ EhrRequest /destination /agentOrgSDS /agentOrganizationSDS /id/@extension</td> <td>ODS code of their Sending system</td> </tr> </tbody> </table>	Data Field	Node path	Value	NHS Number	/ EhrRequest /patient /id/@extension	Patient's stored NHS Number	Previous Practice Code	/ EhrRequest /destination /agentOrgSDS /agentOrganizationSDS /id/@extension	ODS code of their Sending system	MUST			
Data Field	Node path	Value												
NHS Number	/ EhrRequest /patient /id/@extension	Patient's stored NHS Number												
Previous Practice Code	/ EhrRequest /destination /agentOrgSDS /agentOrganizationSDS /id/@extension	ODS code of their Sending system												
TD16	After creation of the EHR Request, the Requesting system <b>shall</b> validate the message against the message schema to check it is valid and well-formed.	MUST												
TD17	<p>If the EHR Request creation or validation fails, the Requesting system <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>• Inform the user that GP2GP is not possible due to a failure to create the request</li> <li>• Record the error in the system audit trail</li> <li>• End the GP2GP transfer process</li> <li>• Record Management Information as follows:</li> </ul> <table border="1"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Process failure point (RR8)</td> <td>60</td> </tr> <tr> <td>Failure point Date/time (RR9)</td> <td>Current date and time</td> </tr> <tr> <td>Failure type (RR11)</td> <td>0</td> </tr> <tr> <td>Error code (RR12)</td> <td>18</td> </tr> <tr> <td>Error description (RR13)</td> <td>Insert the response text from Response code 18</td> </tr> </tbody> </table>	Field name	Value	Process failure point (RR8)	60	Failure point Date/time (RR9)	Current date and time	Failure type (RR11)	0	Error code (RR12)	18	Error description (RR13)	Insert the response text from Response code 18	MUST
Field name	Value													
Process failure point (RR8)	60													
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Failure type (RR11)	0													
Error code (RR12)	18													
Error description (RR13)	Insert the response text from Response code 18													

## 5.9 Step 8: Sending the EHR Request

If the message created passes schema validation the system **shall** send it to the Sending system via TMS. The sending behaviour is determined by the ebXML contract properties retrieved from SDS when querying the MHS object of the Sending system.

Req ID	Requirement Text	Priority												
TD18	On successful creation of the EHR Request, the Requesting system <i>shall</i> send it to the Multi-hop Intermediary Reliability (also known as 'Forward Reliable') channel of the TMS.	MUST												
TD18.1	<p>If an error occurs when sending the EHR Request to TMS or TMS responds with a negative ebXML Acknowledgement, the Requesting system <i>shall</i> take the following actions:</p> <ul style="list-style-type: none"> <li>• Inform the user that GP2GP is not possible due to a failure to create the request</li> <li>• Record the error in the system audit trail</li> <li>• End the GP2GP transfer process</li> <li>• Record Management Information as follows:</li> </ul> <table border="1" data-bbox="280 891 1225 1247"> <thead> <tr> <th data-bbox="280 891 753 943">Field name</th> <th data-bbox="753 891 1225 943">Value</th> </tr> </thead> <tbody> <tr> <td data-bbox="280 943 753 994">Process failure point (RR8)</td> <td data-bbox="753 943 1225 994">60</td> </tr> <tr> <td data-bbox="280 994 753 1046">Failure point Date/time (RR9)</td> <td data-bbox="753 994 1225 1046">Current date and time</td> </tr> <tr> <td data-bbox="280 1046 753 1097">Failure type (RR11)</td> <td data-bbox="753 1046 1225 1097">0</td> </tr> <tr> <td data-bbox="280 1097 753 1149">Error code (RR12)</td> <td data-bbox="753 1097 1225 1149">20</td> </tr> <tr> <td data-bbox="280 1149 753 1247">Error description (RR13)</td> <td data-bbox="753 1149 1225 1247">Insert the response text from Response code 20</td> </tr> </tbody> </table>	Field name	Value	Process failure point (RR8)	60	Failure point Date/time (RR9)	Current date and time	Failure type (RR11)	0	Error code (RR12)	20	Error description (RR13)	Insert the response text from Response code 20	
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## 5.10 Step 9: Receive a response to the EHR Request

If the Sending system is GP2GP 1.1a or 2.2a or 2.2b compliant the Requesting system will either receive a positive Application Acknowledgement followed by the EHR Extract or a negative Application Acknowledgement ending the GP2GP transfer process. *Note that the EHR Extract may arrive before or after the Application Acknowledgement.*

If the Sending system is GP2GP 2.2c or later compliant the Requesting system will either receive the EHR Extract, with or without one or more Common Point to Point messages, or a negative Application Acknowledgement ending the GP2GP transfer process.

### 5.10.1 Receiving an Application Acknowledgement response to an EHR Request

Req ID	Requirement Text	Priority
TD19	On receipt of an Application Acknowledgement message from TMS, the Requesting system <b>shall</b> examine the message to determine which message this is in response to e.g. EHR Request, Common Point to Point, EHR Extract.	MUST
TD19.1	If the Application Acknowledgement is in response to an EHR Request, the Requesting system <b>shall</b> determine if the message is a positive or negative response by examining the content. Consult the GP2GP Response Codes document [Ref: 18].	MUST
TD19.2	If the Application Acknowledgement is positive, the Requesting system <b>shall</b> update the status of the GP2GP Transfer for this patient's registration and await the EHR Extract which will follow.  Note that the EHR Extract may arrive before the Application Acknowledgement and the Requesting system should not tie workflow to message order.	MUST

Req ID	Requirement Text	Priority												
TD19.3	<p>If the Application Acknowledgement is negative, the Requesting system <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>Update the status of the GP2GP Transfer for this patient's registration</li> <li>Record the error in the system audit trail</li> <li>End the GP2GP transfer process</li> <li>Record Management Information as follows:</li> </ul> <table border="1"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Process failure point (RR8)</td> <td>60</td> </tr> <tr> <td>Failure point Date/time (RR9)</td> <td>Current date and time</td> </tr> <tr> <td>Failure type (RR11)</td> <td>6</td> </tr> <tr> <td>Error code (RR12)</td> <td>The Response code received</td> </tr> <tr> <td>Error description (RR13)</td> <td>The response text from appropriate Response code</td> </tr> </tbody> </table>	Field name	Value	Process failure point (RR8)	60	Failure point Date/time (RR9)	Current date and time	Failure type (RR11)	6	Error code (RR12)	The Response code received	Error description (RR13)	The response text from appropriate Response code	MUST
Field name	Value													
Process failure point (RR8)	60													
Failure point Date/time (RR9)	Current date and time													
Failure type (RR11)	6													
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Error description (RR13)	The response text from appropriate Response code													

### 5.10.2 Receiving an EHR Extract Message

The Requesting system will check the EHR Extract Message is valid and respond with a negative Application Acknowledgement if it is not. The Requesting system will also record appropriate Management Information.

Where the Sending system identifies that the EHR Extract will require the use of Large Messaging (i.e. according to the Spine TMS limitations on size, attachments or unsupported MIME types) it will check whether the Requesting System supports Large Messaging by querying SDS.

If Large Messaging is not supported by either Requesting or Sending system when it is required, a negative Application Acknowledgement in Step 6 will be returned unless placeholders are used for Spine unsupported MIME types where this is the cause of the Large Messaging requirement.

If the Requesting system supports Large Messaging, on receipt of the EHR Extract Message, it will check for references to other messages identified by "mid:" rather than "cid:". If "mid" references are present the system will respond with a "Continue" Common Point to Point message. See Supp Spec: Handling Large Messages [Ref: 13] for further details.

Req ID	Requirement Text	Priority
TD20	On receipt of an EHR Extract Message that corresponds to a previous EHR Request (i.e. consistent conversation ID), the Requesting system <b>shall</b> record Management Information as follows:	MUST

Req ID	Requirement Text	Priority																				
	<table border="1"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>EHR Extract receipt date/time (RR17)</td> <td>The current date and time</td> </tr> <tr> <td>EHR Extract Message ID (RR18)</td> <td>The GUID of the EHR Extract Message</td> </tr> </tbody> </table>	Field name	Value	EHR Extract receipt date/time (RR17)	The current date and time	EHR Extract Message ID (RR18)	The GUID of the EHR Extract Message															
Field name	Value																					
EHR Extract receipt date/time (RR17)	The current date and time																					
EHR Extract Message ID (RR18)	The GUID of the EHR Extract Message																					
TD21	On receipt of an EHR Extract Message that DOES NOT correspond to a previous EHR Request the Requesting system <b>shall</b> respond with a negative Application Acknowledgement with Response code 09.	MUST																				
TD22	<p>On receipt of an EHR Extract Message, the Requesting system <b>shall</b> check the validity of the message and <b>shall</b> take the follow actions if the message is not well-formed or invalid in some way:</p> <ul style="list-style-type: none"> <li>• Update the status of the GP2GP Transfer for this patient’s registration</li> <li>• Record the error in the system audit trail</li> <li>• Send a negative Application Acknowledgement to the Sending system with Response code 21</li> <li>• Record Management Information as follows:</li> </ul> <table border="1"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Process failure point (RR8)</td> <td>60</td> </tr> <tr> <td>Failure point Date/time (RR9)</td> <td>Current date and time</td> </tr> <tr> <td>Failure type (RR11)</td> <td>6</td> </tr> <tr> <td>Error code (RR12)</td> <td>21</td> </tr> <tr> <td>Error description (RR13)</td> <td>The response text from Response code 21</td> </tr> <tr> <td>EHR Extract Acknowledgement (RR22)</td> <td>2</td> </tr> <tr> <td>EHR Extract Acknowledgement detail sent (RR23)</td> <td>21</td> </tr> <tr> <td>EHR Extract Acknowledgement Date/time (RR24)</td> <td>Current date and time</td> </tr> <tr> <td>EHR Extract Acknowledgement message ID (RR25)</td> <td>The GUID of the Application Acknowledgement</td> </tr> </tbody> </table>	Field name	Value	Process failure point (RR8)	60	Failure point Date/time (RR9)	Current date and time	Failure type (RR11)	6	Error code (RR12)	21	Error description (RR13)	The response text from Response code 21	EHR Extract Acknowledgement (RR22)	2	EHR Extract Acknowledgement detail sent (RR23)	21	EHR Extract Acknowledgement Date/time (RR24)	Current date and time	EHR Extract Acknowledgement message ID (RR25)	The GUID of the Application Acknowledgement	MUST
Field name	Value																					
Process failure point (RR8)	60																					
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EHR Extract Acknowledgement (RR22)	2																					
EHR Extract Acknowledgement detail sent (RR23)	21																					
EHR Extract Acknowledgement Date/time (RR24)	Current date and time																					
EHR Extract Acknowledgement message ID (RR25)	The GUID of the Application Acknowledgement																					
TD22.1	After the EHR Extract Message passes validation, the Requesting system <b>shall</b> check the attachment references for references to other messages. The presence of these <b>shall</b> be determined by the text string “mid:”.	MUST																				



Req ID	Requirement Text	Priority						
TD22.2	<p>If the “mid:” strings are NOT present, the Requesting system <b>shall</b> take the follow actions:</p> <ul style="list-style-type: none"> <li>Record Management Information as follows:</li> </ul> <table border="1" data-bbox="304 506 1235 748"> <thead> <tr> <th data-bbox="304 506 772 562">Field name</th> <th data-bbox="772 506 1235 562">Value</th> </tr> </thead> <tbody> <tr> <td data-bbox="304 562 772 613">Reason for Large Message (RR19)</td> <td data-bbox="772 562 1235 613">0</td> </tr> <tr> <td data-bbox="304 613 772 748">Total number of Large Message Common Point to Point fragments (RR20)</td> <td data-bbox="772 613 1235 748">0</td> </tr> </tbody> </table>	Field name	Value	Reason for Large Message (RR19)	0	Total number of Large Message Common Point to Point fragments (RR20)	0	MUST
Field name	Value							
Reason for Large Message (RR19)	0							
Total number of Large Message Common Point to Point fragments (RR20)	0							
TD22.3	<p>If the “mid:” strings are present, the Requesting system <b>shall</b> take the follow actions:</p> <ul style="list-style-type: none"> <li>Create and send a “continue” acknowledgement in a Common Point to Point message – consult the Supp Spec: Handling Large Messages document [Ref: 13]</li> <li>Determine the reason (if possible) for using Large Messaging from the references.</li> <li>Recalculate the EHR Transfer Timeout using the number of “mid:” references multiplied by the persistDuration value of the Common Point to Point (COPC_IN000001UK01) in the Sending Systems MHS entry on SDS</li> <li>Record Management Information as follows:</li> </ul> <table border="1" data-bbox="304 1308 1235 1632"> <thead> <tr> <th data-bbox="304 1308 772 1364">Field name</th> <th data-bbox="772 1308 1235 1364">Value</th> </tr> </thead> <tbody> <tr> <td data-bbox="304 1364 772 1498">Reason for Large Message (RR19)</td> <td data-bbox="772 1364 1235 1498">1/2/3/4/5 as determined (consult Harvesting management information [Ref: 15])</td> </tr> <tr> <td data-bbox="304 1498 772 1632">Total number of Large Message Common Point to Point fragments (RR20)</td> <td data-bbox="772 1498 1235 1632">The total number of “mid:” references in EHR Extract</td> </tr> </tbody> </table>	Field name	Value	Reason for Large Message (RR19)	1/2/3/4/5 as determined (consult Harvesting management information [Ref: 15])	Total number of Large Message Common Point to Point fragments (RR20)	The total number of “mid:” references in EHR Extract	MUST
Field name	Value							
Reason for Large Message (RR19)	1/2/3/4/5 as determined (consult Harvesting management information [Ref: 15])							
Total number of Large Message Common Point to Point fragments (RR20)	The total number of “mid:” references in EHR Extract							
TD22.4	The Requesting system <b>shall</b> send the “continue” message over the TMS Multi-Hop Intermediary Reliability (also known as “forward reliable”) channel.	MUST						
TD22.5	<p>If an error occurs when sending the Common Point to Point “continue” message to TMS or TMS responds with a negative ebXML Acknowledgement, the Requesting system <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>Send a negative Application Acknowledgement for the EHR Extract Message to the Sending system with Response code 20</li> <li>Record the error in the system audit trail</li> </ul>	MUST						

Req ID	Requirement Text	Priority												
	<ul style="list-style-type: none"> <li>Record Management Information as follows:</li> </ul> <table border="1"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Process failure point (RR8)</td> <td>60</td> </tr> <tr> <td>Failure point Date/time (RR9)</td> <td>Current date and time</td> </tr> <tr> <td>Failure type (RR11)</td> <td>0</td> </tr> <tr> <td>Error code (RR12)</td> <td>20</td> </tr> <tr> <td>Error description (RR13)</td> <td>Insert the response text from Response code 20</td> </tr> </tbody> </table>	Field name	Value	Process failure point (RR8)	60	Failure point Date/time (RR9)	Current date and time	Failure type (RR11)	0	Error code (RR12)	20	Error description (RR13)	Insert the response text from Response code 20	
Field name	Value													
Process failure point (RR8)	60													
Failure point Date/time (RR9)	Current date and time													
Failure type (RR11)	0													
Error code (RR12)	20													
Error description (RR13)	Insert the response text from Response code 20													

### 5.10.3 Receiving a Large Message – Common Point to Point

Large Messages will only be received if the Requesting system has previously returned a “Continue” response to a received EHR Extract Message.

When Large Messaging is being used the EHR Transfer Timeout is calculated dynamically using the number of Large Messages being sent (see Supp Spec: Handling Large Messages [Ref: 13]). However, where a message (i.e. an individual “mid:” reference) is greater than the Spine max message size (currently 5MB) the Sender will split it into multiple fragments each with its own timeout period so if the time period for a single message was 1hr but it was split into 3 fragments the recalculated timeout for that message would now be 3hrs.

If an error occurs during the receipt of any Common Point to Point messages resulting in a failure to receive the complete EHR Extract sent, the Requesting system will end the GP2GP Transfer Process and return a negative Application Acknowledgement to the associated EHR Extract Message. This can either be sent immediately (preferable) an error is encountered or when the EHR Transfer Timeout is reached.

Req ID	Requirement Text	Priority		
TD23	<p>The Requesting system <b>shall</b> validate each Common Point to Point message received and take the follow actions if the message is not well-formed or invalid in some way:</p> <ul style="list-style-type: none"> <li>Update the status of the GP2GP Transfer for this patient’s registration</li> <li>Record the error in the system audit trail</li> <li>Send a negative Application Acknowledgement for the Common Point to Point message to the Sending system with Response code 30</li> <li>Send a negative Application Acknowledgement for the EHR Extract Message to the Sending system with Response code 31</li> <li>Record Management Information as follows:</li> </ul> <table border="1"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> </tbody> </table>	Field name	Value	MUST
Field name	Value			

Req ID	Requirement Text	Priority																		
	<table border="1"> <tr> <td>Process failure point (RR8)</td> <td>60</td> </tr> <tr> <td>Failure point Date/time (RR9)</td> <td>Current date and time</td> </tr> <tr> <td>Failure type (RR11)</td> <td>6</td> </tr> <tr> <td>Error code (RR12)</td> <td>30</td> </tr> <tr> <td>Error description (RR13)</td> <td>The response text from Response code 30</td> </tr> <tr> <td>EHR Extract Acknowledgement (RR22)</td> <td>2</td> </tr> <tr> <td>EHR Extract Acknowledgement detail sent (RR23)</td> <td>31</td> </tr> <tr> <td>EHR Extract Acknowledgement Date/time (RR24)</td> <td>Current date and time</td> </tr> <tr> <td>EHR Extract Acknowledgement message ID (RR25)</td> <td>The GUID of the App Ack</td> </tr> </table>	Process failure point (RR8)	60	Failure point Date/time (RR9)	Current date and time	Failure type (RR11)	6	Error code (RR12)	30	Error description (RR13)	The response text from Response code 30	EHR Extract Acknowledgement (RR22)	2	EHR Extract Acknowledgement detail sent (RR23)	31	EHR Extract Acknowledgement Date/time (RR24)	Current date and time	EHR Extract Acknowledgement message ID (RR25)	The GUID of the App Ack	
Process failure point (RR8)	60																			
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EHR Extract Acknowledgement Date/time (RR24)	Current date and time																			
EHR Extract Acknowledgement message ID (RR25)	The GUID of the App Ack																			
TD24	On receipt of each Common Point to Point message that indicates that an attachment has been split into fragments over multiple Common Point to Point messages, the Requesting system <b>shall</b> recalculate the overall EHR Transfer Timeout.	MUST																		
TD24.1	<p>If the EHR Transfer Timeout period has been exceeded (see below) the Requesting system <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>Send a negative Application Acknowledgement for the Common Point to Point message to the Sending system with Response code 25</li> <li>Send a negative Application Acknowledgement for the EHR Extract Message to the Sending system with Response code 31</li> <li>Record Management Information as follows:</li> </ul> <table border="1"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Reason for Large Message (RR19)</td> <td>1/2/3/4/5 (this may not be determinable at this time)</td> </tr> <tr> <td>Total number of Large Message Common Point to Point fragments (RR20)</td> <td><i>Number of mid: references in EHR Extract (if not already set)</i></td> </tr> <tr> <td>EHR Extract Acknowledgement (RR22)</td> <td>6</td> </tr> <tr> <td>Error code (RR12)</td> <td>25</td> </tr> </tbody> </table>	Field name	Value	Reason for Large Message (RR19)	1/2/3/4/5 (this may not be determinable at this time)	Total number of Large Message Common Point to Point fragments (RR20)	<i>Number of mid: references in EHR Extract (if not already set)</i>	EHR Extract Acknowledgement (RR22)	6	Error code (RR12)	25	MUST								
Field name	Value																			
Reason for Large Message (RR19)	1/2/3/4/5 (this may not be determinable at this time)																			
Total number of Large Message Common Point to Point fragments (RR20)	<i>Number of mid: references in EHR Extract (if not already set)</i>																			
EHR Extract Acknowledgement (RR22)	6																			
Error code (RR12)	25																			

Req ID	Requirement Text		Priority				
	Error description (RR13)	The response text from Response code 25					
	EHR Extract Acknowledgement detail sent (RR23)	31					
	EHR Extract Acknowledgement Date/time (RR24)	Current date and time					
	EHR Extract Acknowledgement message ID (RR25)	The GUID of the App Ack					
	<p>A timeout <b>shall</b> occur if the 'creationtime' value of the EHR Extract Message + the EHR Transfer Timeout exceeds the current time (adjusted to UTC). (Note all messaging use UTC timestamps)</p> <p>This check <b>shall</b> precede any re-assembly steps and therefore positive Application Acknowledgements to the message.</p>						
TD25	On receipt of a Common Point to Point message, the Requesting system <b>shall</b> examine the references and Message ID to determine if this message carries a whole attachment or part of an attachment split into many fragments.		MUST				
TD25.1	If the message contains "mid:" references it is the first message of a set of Common Point to Point messages containing a fragmented attachment. (Note that the other messages in the set do not contain any references). The system <b>shall</b> use this to identify all of the individual Common Point to Point messages carrying the fragments.		MUST				
TD25.2	When the final part of a fragmented attachment has been received, the Requesting system <b>shall</b> attempt to re-assemble the attachment from the received fragments before sending an Application Acknowledgement to the final part.		MUST				
TD25.2.1	<p>If the re-assembly fails, the Requesting system <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>Send a negative Application Acknowledgement for the Common Point to Point message to the Sending system with Response code 29</li> <li>Send a negative Application Acknowledgement for the EHR Extract Message to the Sending system with Response code 31</li> <li>Record Management Information as follows:</li> </ul> <table border="1"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>EHR Extract Acknowledgement</td> <td>6</td> </tr> </tbody> </table>		Field name	Value	EHR Extract Acknowledgement	6	MUST
Field name	Value						
EHR Extract Acknowledgement	6						

Req ID	Requirement Text	Priority												
	<table border="1"> <tr> <td data-bbox="295 353 767 409">(RR22)</td> <td data-bbox="767 353 1232 409"></td> </tr> <tr> <td data-bbox="295 409 767 465">Error code (RR12)</td> <td data-bbox="767 409 1232 465">29</td> </tr> <tr> <td data-bbox="295 465 767 562">Error description (RR13)</td> <td data-bbox="767 465 1232 562">The response text from Response code 29</td> </tr> <tr> <td data-bbox="295 562 767 658">EHR Extract Acknowledgement detail sent (RR23)</td> <td data-bbox="767 562 1232 658">31</td> </tr> <tr> <td data-bbox="295 658 767 754">EHR Extract Acknowledgement Date/time (RR24)</td> <td data-bbox="767 658 1232 754">Current date and time</td> </tr> <tr> <td data-bbox="295 754 767 860">EHR Extract Acknowledgement message ID (RR25)</td> <td data-bbox="767 754 1232 860">The GUID of the App Ack</td> </tr> </table>	(RR22)		Error code (RR12)	29	Error description (RR13)	The response text from Response code 29	EHR Extract Acknowledgement detail sent (RR23)	31	EHR Extract Acknowledgement Date/time (RR24)	Current date and time	EHR Extract Acknowledgement message ID (RR25)	The GUID of the App Ack	
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EHR Extract Acknowledgement Date/time (RR24)	Current date and time													
EHR Extract Acknowledgement message ID (RR25)	The GUID of the App Ack													
TD25.2.2	<p>If the re-assembly succeeds, the Requesting system <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>Send a positive Application Acknowledgement for the Common Point to Point message to the Sending system</li> <li>Revise Management Information as follows:</li> </ul> <table border="1"> <thead> <tr> <th data-bbox="295 1106 767 1162">Field name</th> <th data-bbox="767 1106 1232 1162">Value</th> </tr> </thead> <tbody> <tr> <td data-bbox="295 1162 767 1258">Reason for Large Message (RR19)</td> <td data-bbox="767 1162 1232 1258">1/2/3/4/5 (this may not be determinable at this time)</td> </tr> <tr> <td data-bbox="295 1258 767 1397">Total number of Large Message Common Point to Point fragments (RR20)</td> <td data-bbox="767 1258 1232 1397">Add 1 to previous figure</td> </tr> <tr> <td data-bbox="295 1397 767 1534">Total number of Large Message Common Point to Point fragments successfully received (RR21)</td> <td data-bbox="767 1397 1232 1534"><i>Add 1 to previous figure</i></td> </tr> </tbody> </table>	Field name	Value	Reason for Large Message (RR19)	1/2/3/4/5 (this may not be determinable at this time)	Total number of Large Message Common Point to Point fragments (RR20)	Add 1 to previous figure	Total number of Large Message Common Point to Point fragments successfully received (RR21)	<i>Add 1 to previous figure</i>	MUST				
Field name	Value													
Reason for Large Message (RR19)	1/2/3/4/5 (this may not be determinable at this time)													
Total number of Large Message Common Point to Point fragments (RR20)	Add 1 to previous figure													
Total number of Large Message Common Point to Point fragments successfully received (RR21)	<i>Add 1 to previous figure</i>													

Req ID	Requirement Text	Priority								
TD25.3	<p>If the Common Point to Point message is one of many parts, not first or last, of a fragmented attachment, the Requesting system <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>• Send a positive Application Acknowledgement to the Sending system</li> <li>• Revise Management Information as follows:</li> </ul> <table border="1" data-bbox="304 600 1230 1025"> <thead> <tr> <th data-bbox="304 600 767 651">Field name</th> <th data-bbox="767 600 1230 651">Value</th> </tr> </thead> <tbody> <tr> <td data-bbox="304 651 767 745">Reason for Large Message (RR19)</td> <td data-bbox="767 651 1230 745">1/2/3/4/5 (this may not be determinable at this time)</td> </tr> <tr> <td data-bbox="304 745 767 887">Total number of Large Message Common Point to Point fragments (RR20)</td> <td data-bbox="767 745 1230 887">Add 1 to previous figure</td> </tr> <tr> <td data-bbox="304 887 767 1025">Total number of Large Message Common Point to Point fragments successfully received (RR21)</td> <td data-bbox="767 887 1230 1025"><i>Add 1 to previous figure</i></td> </tr> </tbody> </table>	Field name	Value	Reason for Large Message (RR19)	1/2/3/4/5 (this may not be determinable at this time)	Total number of Large Message Common Point to Point fragments (RR20)	Add 1 to previous figure	Total number of Large Message Common Point to Point fragments successfully received (RR21)	<i>Add 1 to previous figure</i>	MUST
Field name	Value									
Reason for Large Message (RR19)	1/2/3/4/5 (this may not be determinable at this time)									
Total number of Large Message Common Point to Point fragments (RR20)	Add 1 to previous figure									
Total number of Large Message Common Point to Point fragments successfully received (RR21)	<i>Add 1 to previous figure</i>									
TD25.4	<p>If the Common Point to Point message is the only message for the attachment, the Requesting system <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>• Send a positive Application Acknowledgement for the Common Point to Point message to the Sending system</li> <li>• Revise Management Information as follows:</li> </ul> <table border="1" data-bbox="304 1272 1230 1561"> <thead> <tr> <th data-bbox="304 1272 767 1323">Field name</th> <th data-bbox="767 1272 1230 1323">Value</th> </tr> </thead> <tbody> <tr> <td data-bbox="304 1323 767 1417">Reason for Large Message (RR19)</td> <td data-bbox="767 1323 1230 1417">1/2/3/4/5 (this may not be determinable at this time)</td> </tr> <tr> <td data-bbox="304 1417 767 1561">Total number of Large Message Common Point to Point fragments successfully received (RR21)</td> <td data-bbox="767 1417 1230 1561"><i>Add 1 to previous figure</i></td> </tr> </tbody> </table>	Field name	Value	Reason for Large Message (RR19)	1/2/3/4/5 (this may not be determinable at this time)	Total number of Large Message Common Point to Point fragments successfully received (RR21)	<i>Add 1 to previous figure</i>	MUST		
Field name	Value									
Reason for Large Message (RR19)	1/2/3/4/5 (this may not be determinable at this time)									
Total number of Large Message Common Point to Point fragments successfully received (RR21)	<i>Add 1 to previous figure</i>									

## 5.11 Step 10: Processing a successfully received EHR Extract

If the receipt of the EHR Extract was unsuccessful (for a variety of reasons covered in the previous steps) the system will return an appropriately coded negative Application Acknowledgement for the EHR Extract Message.

Following successful receipt of an EHR Extract and, if applicable, all of its attachments, the system will perform further checks to determine whether the EHR Extract is valid. If it is invalid it will generate an error response and if not it will be passed to system users for processing. A suitably authenticated and authorised user will select or reject the EHR Extract for integration into the patient's record the result of which will also determine the nature of the Application Acknowledgement returned.

Req ID	Requirement Text	Priority										
TD27	<p>When an EHR Extract has been successfully received (i.e. all sent attachments received, not timed out) the Requesting system <b>shall</b> perform the following checks:</p> <ul style="list-style-type: none"> <li>Was the EHR Extract requested by the system?</li> <li>Is this a duplicate EHR Extract and the previous EHR Extract is either awaiting processing or was integrated?</li> </ul>	MUST										
TD27.1	<p>The Requesting system <b>shall</b> automatically reject the EHR Extract if it cannot find a matching EHR Request and <b>should</b> take the following actions:</p> <ul style="list-style-type: none"> <li>Update the status of the GP2GP Transfer for this patient's registration</li> </ul> <p>The Requesting system <b>shall</b>:</p> <ul style="list-style-type: none"> <li>Record the error in the system audit trail</li> <li>Send a negative Application Acknowledgement for the EHR Extract Message to the Sending system with Response code 09</li> <li>Record Management Information as follows:</li> </ul> <table border="1"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Conversation ID (RR2)</td> <td>As detailed in the message</td> </tr> <tr> <td>EHR Extract Acknowledgement (RR22)</td> <td>4</td> </tr> <tr> <td>EHR Extract Acknowledgement detail sent (RR23)</td> <td>09</td> </tr> <tr> <td>EHR Extract Acknowledgement message ID (RR25)</td> <td>The GUID of the Application Acknowledgement</td> </tr> </tbody> </table>	Field name	Value	Conversation ID (RR2)	As detailed in the message	EHR Extract Acknowledgement (RR22)	4	EHR Extract Acknowledgement detail sent (RR23)	09	EHR Extract Acknowledgement message ID (RR25)	The GUID of the Application Acknowledgement	MUST
Field name	Value											
Conversation ID (RR2)	As detailed in the message											
EHR Extract Acknowledgement (RR22)	4											
EHR Extract Acknowledgement detail sent (RR23)	09											
EHR Extract Acknowledgement message ID (RR25)	The GUID of the Application Acknowledgement											

Req ID	Requirement Text		Priority												
	EHR Extract Acknowledgement date/time (RR24)	The current date and time													
	User Identifier for EHR Extract integration or rejection (RR31)	SYSTEM													
TD27.2	<p>The Requesting system <b>shall</b> automatically reject the EHR Extract if it is a duplicate of a previously integrated EHR Extract that is awaiting integration or has already been integrated and <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>Record the error in the system audit trail</li> <li>Send a negative Application Acknowledgement for the EHR Extract Message to the Sending system with Response code 12</li> <li>Record Management Information as follows:</li> </ul> <table border="1" data-bbox="280 887 1224 1408"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>EHR Extract Acknowledgement (RR22)</td> <td>3</td> </tr> <tr> <td>EHR Extract Acknowledgement detail sent (RR23)</td> <td>12</td> </tr> <tr> <td>EHR Extract Acknowledgement message ID (RR25)</td> <td>The GUID of the Application Acknowledgement</td> </tr> <tr> <td>EHR Extract Acknowledgement date/time (RR24)</td> <td>The current date and time</td> </tr> <tr> <td>User Identifier for EHR Extract integration or rejection (RR31)</td> <td>SYSTEM</td> </tr> </tbody> </table>		Field name	Value	EHR Extract Acknowledgement (RR22)	3	EHR Extract Acknowledgement detail sent (RR23)	12	EHR Extract Acknowledgement message ID (RR25)	The GUID of the Application Acknowledgement	EHR Extract Acknowledgement date/time (RR24)	The current date and time	User Identifier for EHR Extract integration or rejection (RR31)	SYSTEM	
Field name	Value														
EHR Extract Acknowledgement (RR22)	3														
EHR Extract Acknowledgement detail sent (RR23)	12														
EHR Extract Acknowledgement message ID (RR25)	The GUID of the Application Acknowledgement														
EHR Extract Acknowledgement date/time (RR24)	The current date and time														
User Identifier for EHR Extract integration or rejection (RR31)	SYSTEM														
TD28	<p>When a user selects to reject an EHR Extract the Requesting system <b>shall</b> require the user to select a reason from the applicable GP2GP Response codes. [Ref: 18]</p> <p>The Requesting system <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>Update the status of the GP2GP Transfer for this patient's registration</li> <li>Record the error in the system audit trail</li> <li>Send a negative Application Acknowledgement for the EHR Extract Message to the Sending system with Response code 15/17/28 as appropriate [Ref: 18]</li> <li>Record Management Information as follows:</li> </ul> <table border="1" data-bbox="280 1904 1224 2045"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>EHR Extract Acknowledgement (RR22)</td> <td>2</td> </tr> </tbody> </table>		Field name	Value	EHR Extract Acknowledgement (RR22)	2	MUST								
Field name	Value														
EHR Extract Acknowledgement (RR22)	2														



Req ID	Requirement Text	Priority												
	<table border="1"> <tr> <td data-bbox="279 353 751 450">EHR Extract Acknowledgement detail sent (RR23)</td> <td data-bbox="751 353 1219 450">15/17/28 as appropriate [Ref: 18]</td> </tr> <tr> <td data-bbox="279 450 751 546">EHR Extract Acknowledgement message ID (RR25)</td> <td data-bbox="751 450 1219 546">The GUID of the Application Acknowledgement</td> </tr> <tr> <td data-bbox="279 546 751 642">EHR Extract Acknowledgement date/time (RR24)</td> <td data-bbox="751 546 1219 642"><i>current date and time</i></td> </tr> <tr> <td data-bbox="279 642 751 779">User Identifier for EHR integration or rejection = The user's Smartcard UUID (RR31)</td> <td data-bbox="751 642 1219 779">The user's Smartcard UUID</td> </tr> </table>	EHR Extract Acknowledgement detail sent (RR23)	15/17/28 as appropriate [Ref: 18]	EHR Extract Acknowledgement message ID (RR25)	The GUID of the Application Acknowledgement	EHR Extract Acknowledgement date/time (RR24)	<i>current date and time</i>	User Identifier for EHR integration or rejection = The user's Smartcard UUID (RR31)	The user's Smartcard UUID					
EHR Extract Acknowledgement detail sent (RR23)	15/17/28 as appropriate [Ref: 18]													
EHR Extract Acknowledgement message ID (RR25)	The GUID of the Application Acknowledgement													
EHR Extract Acknowledgement date/time (RR24)	<i>current date and time</i>													
User Identifier for EHR integration or rejection = The user's Smartcard UUID (RR31)	The user's Smartcard UUID													
TD29	<p>When a user selects to File an EHR Extract as an Attachment (Returning Patient where A-B-A requirements are not supported) to the patient EPR, the Requesting system <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>Update the status of the GP2GP Transfer for this patient's registration</li> <li>Record the error in the system audit trail</li> <li>Send a negative Application Acknowledgement for the EHR Extract Message to the Sending system with Response code 26</li> <li>Record Management Information as follows:</li> </ul> <table border="1"> <thead> <tr> <th data-bbox="279 1173 751 1227">Field name</th> <th data-bbox="751 1173 1219 1227">Value</th> </tr> </thead> <tbody> <tr> <td data-bbox="279 1227 751 1323">EHR Extract Acknowledgement (RR22)</td> <td data-bbox="751 1227 1219 1323">5</td> </tr> <tr> <td data-bbox="279 1323 751 1420">EHR Extract Acknowledgement detail sent (RR23)</td> <td data-bbox="751 1323 1219 1420">26</td> </tr> <tr> <td data-bbox="279 1420 751 1516">EHR Extract Acknowledgement message ID (RR25)</td> <td data-bbox="751 1420 1219 1516">The GUID of the Application Acknowledgement</td> </tr> <tr> <td data-bbox="279 1516 751 1612">EHR Extract Acknowledgement date/time (RR24)</td> <td data-bbox="751 1516 1219 1612"><i>current date and time</i></td> </tr> <tr> <td data-bbox="279 1612 751 1742">User Identifier for EHR integration or rejection = The user's Smartcard UUID (RR31)</td> <td data-bbox="751 1612 1219 1742">The user's Smartcard UUID</td> </tr> </tbody> </table>	Field name	Value	EHR Extract Acknowledgement (RR22)	5	EHR Extract Acknowledgement detail sent (RR23)	26	EHR Extract Acknowledgement message ID (RR25)	The GUID of the Application Acknowledgement	EHR Extract Acknowledgement date/time (RR24)	<i>current date and time</i>	User Identifier for EHR integration or rejection = The user's Smartcard UUID (RR31)	The user's Smartcard UUID	MUST
Field name	Value													
EHR Extract Acknowledgement (RR22)	5													
EHR Extract Acknowledgement detail sent (RR23)	26													
EHR Extract Acknowledgement message ID (RR25)	The GUID of the Application Acknowledgement													
EHR Extract Acknowledgement date/time (RR24)	<i>current date and time</i>													
User Identifier for EHR integration or rejection = The user's Smartcard UUID (RR31)	The user's Smartcard UUID													
TD30	When a user selects to integrate an EHR Extract the Requesting system <b>shall</b> attempt to integrate the EHR Extract into the patient Electronic Patient Record.	MUST												
TD30.1	<p>If the Requesting system succeeds in integrating the EHR Extract, it <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>Send a positive Application Acknowledgement for the EHR Extract Message to the Sending system</li> </ul>	MUST												

Req ID	Requirement Text	Priority														
	<ul style="list-style-type: none"> <li>Record Management Information as follows: <table border="1" data-bbox="284 409 1225 1120"> <thead> <tr> <th data-bbox="284 409 753 461">Field name</th> <th data-bbox="753 409 1225 461">Value</th> </tr> </thead> <tbody> <tr> <td data-bbox="284 461 753 555">EHR Extract Acknowledgement (RR22)</td> <td data-bbox="753 461 1225 555">1</td> </tr> <tr> <td data-bbox="284 555 753 649">EHR Extract Acknowledgement detail sent (RR23)</td> <td data-bbox="753 555 1225 649">0</td> </tr> <tr> <td data-bbox="284 649 753 743">EHR Extract Acknowledgement message ID (RR25)</td> <td data-bbox="753 649 1225 743">The GUID of the Application Acknowledgement</td> </tr> <tr> <td data-bbox="284 743 753 837">EHR Extract Acknowledgement date/time (RR24)</td> <td data-bbox="753 743 1225 837"><i>current date and time</i></td> </tr> <tr> <td data-bbox="284 837 753 976">User Identifier for EHR integration or rejection = The user's Smartcard UUID (RR31)</td> <td data-bbox="753 837 1225 976">The user's Smartcard UUID</td> </tr> <tr> <td data-bbox="284 976 753 1120">Total number of Large Message Common Point to Point fragments (RR20)</td> <td data-bbox="753 976 1225 1120"><i>Number of Common Point to Point messages (if not already set)</i></td> </tr> </tbody> </table> </li> </ul>	Field name	Value	EHR Extract Acknowledgement (RR22)	1	EHR Extract Acknowledgement detail sent (RR23)	0	EHR Extract Acknowledgement message ID (RR25)	The GUID of the Application Acknowledgement	EHR Extract Acknowledgement date/time (RR24)	<i>current date and time</i>	User Identifier for EHR integration or rejection = The user's Smartcard UUID (RR31)	The user's Smartcard UUID	Total number of Large Message Common Point to Point fragments (RR20)	<i>Number of Common Point to Point messages (if not already set)</i>	
Field name	Value															
EHR Extract Acknowledgement (RR22)	1															
EHR Extract Acknowledgement detail sent (RR23)	0															
EHR Extract Acknowledgement message ID (RR25)	The GUID of the Application Acknowledgement															
EHR Extract Acknowledgement date/time (RR24)	<i>current date and time</i>															
User Identifier for EHR integration or rejection = The user's Smartcard UUID (RR31)	The user's Smartcard UUID															
Total number of Large Message Common Point to Point fragments (RR20)	<i>Number of Common Point to Point messages (if not already set)</i>															
TD30.2	<p>If the Requesting system fails to integrate the EHR Extract successfully, it <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>Update the status of the GP2GP Transfer for this patient's registration</li> <li>Record the error in the system audit trail</li> <li>Send a negative Application Acknowledgement for the EHR Extract Message to the Sending system with Response code 11</li> <li>Record Management Information as follows: <table border="1" data-bbox="284 1473 1225 1993"> <thead> <tr> <th data-bbox="284 1473 753 1525">Field name</th> <th data-bbox="753 1473 1225 1525">Value</th> </tr> </thead> <tbody> <tr> <td data-bbox="284 1525 753 1619">EHR Extract Acknowledgement (RR22)</td> <td data-bbox="753 1525 1225 1619">7</td> </tr> <tr> <td data-bbox="284 1619 753 1713">EHR Extract Acknowledgement detail sent (RR23)</td> <td data-bbox="753 1619 1225 1713">11</td> </tr> <tr> <td data-bbox="284 1713 753 1807">EHR Extract Acknowledgement message ID (RR25)</td> <td data-bbox="753 1713 1225 1807">The GUID of the Application Acknowledgement</td> </tr> <tr> <td data-bbox="284 1807 753 1901">EHR Extract Acknowledgement date/time (RR24)</td> <td data-bbox="753 1807 1225 1901">The current date and time</td> </tr> <tr> <td data-bbox="284 1901 753 1993">User Identifier for EHR Extract integration or rejection (RR31)</td> <td data-bbox="753 1901 1225 1993">The user's Smartcard UUID</td> </tr> </tbody> </table> </li> </ul>	Field name	Value	EHR Extract Acknowledgement (RR22)	7	EHR Extract Acknowledgement detail sent (RR23)	11	EHR Extract Acknowledgement message ID (RR25)	The GUID of the Application Acknowledgement	EHR Extract Acknowledgement date/time (RR24)	The current date and time	User Identifier for EHR Extract integration or rejection (RR31)	The user's Smartcard UUID	MUST		
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EHR Extract Acknowledgement (RR22)	7															
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EHR Extract Acknowledgement date/time (RR24)	The current date and time															
User Identifier for EHR Extract integration or rejection (RR31)	The user's Smartcard UUID															

Req ID	Requirement Text	Priority												
TD31	<p>When an error occurs trying to send a positive or negative Application Acknowledgement, the Requesting system <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>• Record the error in the system audit trail</li> <li>• Record Management Information as follows:</li> </ul> <table border="1" data-bbox="284 562 1225 1102"> <thead> <tr> <th data-bbox="284 562 756 613">Field name</th> <th data-bbox="756 562 1225 613">Value</th> </tr> </thead> <tbody> <tr> <td data-bbox="284 613 756 707">EHR Extract Acknowledgement Failure point Date/time (RR26)</td> <td data-bbox="756 613 1225 707"><i>current date and time</i></td> </tr> <tr> <td data-bbox="284 707 756 808">EHR Extract Acknowledgement Failure type (RR27)</td> <td data-bbox="756 707 1225 808">1 or 2 as appropriate</td> </tr> <tr> <td data-bbox="284 808 756 909">EHR Extract Acknowledgement error code (RR28)</td> <td data-bbox="756 808 1225 909">Where applicable</td> </tr> <tr> <td data-bbox="284 909 756 1010">EHR Extract Acknowledgement error description (RR29)</td> <td data-bbox="756 909 1225 1010">Where applicable</td> </tr> <tr> <td data-bbox="284 1010 756 1102">EHR Extract Acknowledgement retries (RR30)</td> <td data-bbox="756 1010 1225 1102">The number of attempts to send to Spine where applicable</td> </tr> </tbody> </table>	Field name	Value	EHR Extract Acknowledgement Failure point Date/time (RR26)	<i>current date and time</i>	EHR Extract Acknowledgement Failure type (RR27)	1 or 2 as appropriate	EHR Extract Acknowledgement error code (RR28)	Where applicable	EHR Extract Acknowledgement error description (RR29)	Where applicable	EHR Extract Acknowledgement retries (RR30)	The number of attempts to send to Spine where applicable	MUST
Field name	Value													
EHR Extract Acknowledgement Failure point Date/time (RR26)	<i>current date and time</i>													
EHR Extract Acknowledgement Failure type (RR27)	1 or 2 as appropriate													
EHR Extract Acknowledgement error code (RR28)	Where applicable													
EHR Extract Acknowledgement error description (RR29)	Where applicable													
EHR Extract Acknowledgement retries (RR30)	The number of attempts to send to Spine where applicable													

## 6 Sending System Responsibilities

This section details the technical steps required to support the GP2GP process as the Sending system. The Sending system enters the process when it receives an EHR Request from the Requesting system following a patient's registration. The steps the Sending system must follow are outlined below:

- Step 1: Receive and Respond to an EHR Request
- Step 2: Create an EHR Extract message with the appropriate MIM/DMS version from the patient's record
- Step 3: Determine whether the sending of the EHR Extract needs to utilise Large Messaging and check whether systems support it
- Step 4: Retrieve addressing information and contract properties of the Requesting system from SDS
- Step 5: Send the EHR Extract
- Step 6: Send any Large Messages
- Step 7: Return a positive Application Acknowledgement for a MIM 3 EHR Request
- Step 8: Receive an Application Acknowledgement for the EHR Extract
- Step 9: Manual Re-Send of an EHR Extract

## 6.1 System Interaction Diagram

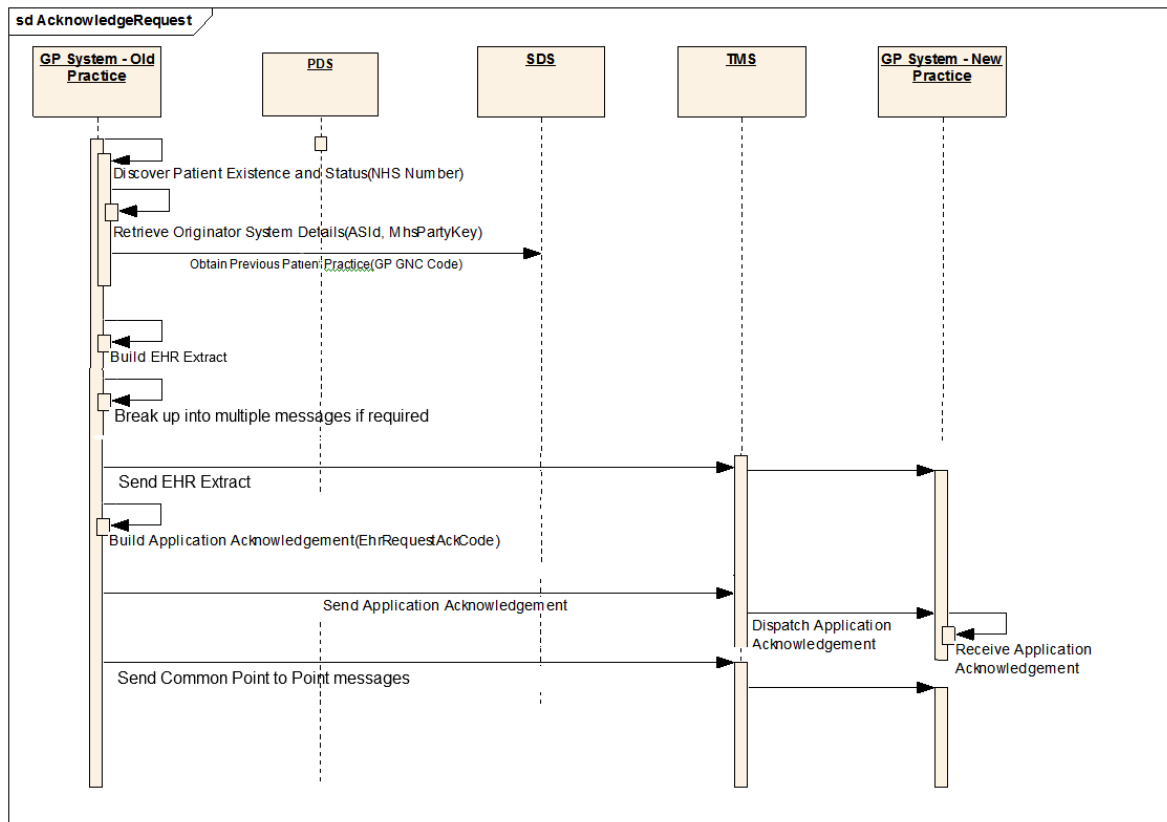


Figure 4 - Receive EHR Request and Send Application Acknowledgement

## 6.2 Step 1: Receive an EHR Request

The Sending system will perform the following initial checks on all received EHR Request messages:

1. That the EHR Request is a valid and well-formed message
2. That the Sending system has GP2GP enabled locally
3. That the patient identified in the request is a current patient in the Local Patient Index.
4. That the Requesting system is the patient's current GP Practice.

And if any of these checks fail, a negative Application Acknowledgement is sent back to the Requestor, details are recorded in Management Information and the GP2GP Transfer process will END.

To perform check 4 the system will send a query to PDS to retrieve the Practice Code (held in the Healthcare Provider element) for the Patient using the NHS number included in the EHR Request. The system will then compare the practice code retrieved from the PDS against the code of the Requesting system in the EHR Request. If all 4 checks pass the creation of the EHR Extract will be automatically triggered.

Req ID	Requirement Text	Priority												
TD50	<p>On receipt of an EHR Request, the Sending system <b>shall</b> record the following Management Information:</p> <table border="1"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>EHR Request ID (SR2)</td> <td><i>The GUID of the EHR Request</i></td> </tr> <tr> <td>Conversation ID (SR3)</td> <td>The Conversation ID in the EHR Request</td> </tr> <tr> <td>Requesting ODS (SR4)</td> <td>The practice code of the Requesting system</td> </tr> <tr> <td>Sending ODS (SR5)</td> <td>The practice code of the Sending system</td> </tr> <tr> <td>EHR Request receipt (SR7)</td> <td><i>current date and time</i></td> </tr> </tbody> </table>	Field name	Value	EHR Request ID (SR2)	<i>The GUID of the EHR Request</i>	Conversation ID (SR3)	The Conversation ID in the EHR Request	Requesting ODS (SR4)	The practice code of the Requesting system	Sending ODS (SR5)	The practice code of the Sending system	EHR Request receipt (SR7)	<i>current date and time</i>	MUST
Field name	Value													
EHR Request ID (SR2)	<i>The GUID of the EHR Request</i>													
Conversation ID (SR3)	The Conversation ID in the EHR Request													
Requesting ODS (SR4)	The practice code of the Requesting system													
Sending ODS (SR5)	The practice code of the Sending system													
EHR Request receipt (SR7)	<i>current date and time</i>													
TD51	<p>When an EHR Request is received by the Sending system, it <b>shall</b> perform the following checks:</p> <ul style="list-style-type: none"> <li>Is the EHR Request invalid or a badly-formed message</li> <li>Is GP2GP disabled locally</li> <li>Is the patient identified in the request not a current patient in the Local Patient Index.</li> <li>Is the Requesting system not the patient's current GP Practice. The system <b>shall</b> do this by performing a PDS Retrieval for the patient and check the value of the Healthcare Provider.</li> </ul> <p>If any of these statements are true, the Requesting system <b>shall</b> send a negative Application Acknowledgement to the Requesting system and record Management Information as defined in this table of requirements.</p>	MUST												
TD51.1	<p>If the Sending system finds the EHR Request message is invalid, it <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>Send a negative Application Acknowledgement to the Requesting system with Response code 18</li> <li>Record the error in the system audit trail</li> <li>End the GP2GP Transfer process</li> <li>Record Management Information as follows:</li> </ul> <table border="1"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>EHR Request Acknowledgement date/time (SR8)</td> <td><i>current date and time</i></td> </tr> <tr> <td>EHR Request Acknowledgement detail sent (SR9)</td> <td>18</td> </tr> </tbody> </table>	Field name	Value	EHR Request Acknowledgement date/time (SR8)	<i>current date and time</i>	EHR Request Acknowledgement detail sent (SR9)	18	MUST						
Field name	Value													
EHR Request Acknowledgement date/time (SR8)	<i>current date and time</i>													
EHR Request Acknowledgement detail sent (SR9)	18													

Req ID	Requirement Text	Priority														
	<table border="1"> <tr> <td>EHR Request Acknowledgement message ID (SR10)</td> <td>The GUID of the Application Acknowledgement</td> </tr> <tr> <td>Process failure point (SR15)</td> <td>0</td> </tr> <tr> <td>Process failure point date/time (SR16)</td> <td><i>current date and time</i></td> </tr> <tr> <td>Failure type (SR18)</td> <td>Null</td> </tr> <tr> <td>Error code (SR19)</td> <td>400</td> </tr> <tr> <td>Error description (SR20)</td> <td>"Bad Request"</td> </tr> </table>	EHR Request Acknowledgement message ID (SR10)	The GUID of the Application Acknowledgement	Process failure point (SR15)	0	Process failure point date/time (SR16)	<i>current date and time</i>	Failure type (SR18)	Null	Error code (SR19)	400	Error description (SR20)	"Bad Request"			
EHR Request Acknowledgement message ID (SR10)	The GUID of the Application Acknowledgement															
Process failure point (SR15)	0															
Process failure point date/time (SR16)	<i>current date and time</i>															
Failure type (SR18)	Null															
Error code (SR19)	400															
Error description (SR20)	"Bad Request"															
TD51.2	<p>If the Sending system does not have GP2GP enabled, it <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>Send a negative Application Acknowledgement to the Requesting system with Response code 07</li> <li>Record the error in the system audit trail</li> <li>End the GP2GP Transfer process</li> <li>Record Management Information as follows:</li> </ul> <table border="1"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>EHR Request Acknowledgement date/time (SR8)</td> <td><i>current date and time</i></td> </tr> <tr> <td>EHR Request Acknowledgement detail sent (SR9)</td> <td>07</td> </tr> <tr> <td>EHR Request Acknowledgement message ID (SR10)</td> <td>The GUID of the Application Acknowledgement</td> </tr> <tr> <td>Process failure point (SR15)</td> <td>0</td> </tr> <tr> <td>Process failure point date/time (SR16)</td> <td><i>current date and time</i></td> </tr> <tr> <td>Application status (HR5)</td> <td>2000000000000000 (1<sup>st</sup> byte indicates GP2GP disabled) NB – Other bytes should be set to 0, 1 or 2 as determined.</td> </tr> </tbody> </table>	Field name	Value	EHR Request Acknowledgement date/time (SR8)	<i>current date and time</i>	EHR Request Acknowledgement detail sent (SR9)	07	EHR Request Acknowledgement message ID (SR10)	The GUID of the Application Acknowledgement	Process failure point (SR15)	0	Process failure point date/time (SR16)	<i>current date and time</i>	Application status (HR5)	2000000000000000 (1 <sup>st</sup> byte indicates GP2GP disabled) NB – Other bytes should be set to 0, 1 or 2 as determined.	MUST
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EHR Request Acknowledgement date/time (SR8)	<i>current date and time</i>															
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EHR Request Acknowledgement message ID (SR10)	The GUID of the Application Acknowledgement															
Process failure point (SR15)	0															
Process failure point date/time (SR16)	<i>current date and time</i>															
Application status (HR5)	2000000000000000 (1 <sup>st</sup> byte indicates GP2GP disabled) NB – Other bytes should be set to 0, 1 or 2 as determined.															
TD51.3	<p>If the Sending system does not have the patient in the Local Patient Index registered (currently or deducted) for General Medical Services, it <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>Send a negative Application Acknowledgement to the Requesting system with Response code 06</li> <li>Record the error in the system audit trail</li> </ul>	MUST														

Req ID	Requirement Text	Priority												
	<ul style="list-style-type: none"> <li>End the GP2GP Transfer process</li> <li>Record Management Information as follows:</li> </ul> <table border="1"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>EHR Request Acknowledgement date/time (SR8)</td> <td><i>current date and time</i></td> </tr> <tr> <td>EHR Request Acknowledgement detail sent (SR9)</td> <td>06</td> </tr> <tr> <td>EHR Request Acknowledgement message ID (SR10)</td> <td>The GUID of the Application Acknowledgement</td> </tr> <tr> <td>Process failure point (SR15)</td> <td>10</td> </tr> <tr> <td>Process failure point date/time (SR16)</td> <td><i>current date and time</i></td> </tr> </tbody> </table>	Field name	Value	EHR Request Acknowledgement date/time (SR8)	<i>current date and time</i>	EHR Request Acknowledgement detail sent (SR9)	06	EHR Request Acknowledgement message ID (SR10)	The GUID of the Application Acknowledgement	Process failure point (SR15)	10	Process failure point date/time (SR16)	<i>current date and time</i>	
Field name	Value													
EHR Request Acknowledgement date/time (SR8)	<i>current date and time</i>													
EHR Request Acknowledgement detail sent (SR9)	06													
EHR Request Acknowledgement message ID (SR10)	The GUID of the Application Acknowledgement													
Process failure point (SR15)	10													
Process failure point date/time (SR16)	<i>current date and time</i>													
TD51.4	If the patient is located in the LPI, the Sending system <b>shall</b> send a PDS Retrieval Query to PDS to get the patient's current GP Practice held in the Healthcare Provider element and compare it with the ODS code of the Requesting system extracted from the received EHR Request message.	MUST												
TD51.4.1	<p>The Sending system <b>shall</b> supply at a minimum these fields to the PDS Retrieval query:</p> <ul style="list-style-type: none"> <li>NHS Number = As received in the EHR Request</li> <li>HistoricIndicator = 0</li> <li>SemanticsText = primaryCare</li> </ul> <table border="1"> <thead> <tr> <th>Data Field</th> <th>Node path</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Patient's NHS Number</td> <td>/ControlActEvent/Query /person.id /value /@extension</td> <td>Entered Patient's NHS Number</td> </tr> <tr> <td>Include History</td> <td>/ControlActEvent/Query /historicDataIndicator/value /@code</td> <td>0</td> </tr> <tr> <td>Retrieve GP Practice</td> <td>/ControlActEvent/Query /retrievalItem /semanticsText</td> <td>primaryCare</td> </tr> </tbody> </table>	Data Field	Node path	Value	Patient's NHS Number	/ControlActEvent/Query /person.id /value /@extension	Entered Patient's NHS Number	Include History	/ControlActEvent/Query /historicDataIndicator/value /@code	0	Retrieve GP Practice	/ControlActEvent/Query /retrievalItem /semanticsText	primaryCare	MUST
Data Field	Node path	Value												
Patient's NHS Number	/ControlActEvent/Query /person.id /value /@extension	Entered Patient's NHS Number												
Include History	/ControlActEvent/Query /historicDataIndicator/value /@code	0												
Retrieve GP Practice	/ControlActEvent/Query /retrievalItem /semanticsText	primaryCare												



Req ID	Requirement Text	Priority																		
TD51.4.2	<p>If the PDS Retrieval fails for whatever reason the Sending system <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>Send a negative Application Acknowledgement to the Requesting system with Response code 20</li> <li>Record the error in the system audit trail</li> <li>Record Management Information as follows:</li> </ul> <table border="1" data-bbox="304 651 1262 1473"> <thead> <tr> <th data-bbox="304 651 783 707">Field name</th> <th data-bbox="783 651 1262 707">Value</th> </tr> </thead> <tbody> <tr> <td data-bbox="304 707 783 797">EHR Request Acknowledgement date/time (SR8)</td> <td data-bbox="783 707 1262 797"><i>current date and time</i></td> </tr> <tr> <td data-bbox="304 797 783 887">EHR Request Acknowledgement detail sent (SR9)</td> <td data-bbox="783 797 1262 887">20</td> </tr> <tr> <td data-bbox="304 887 783 976">EHR Request Acknowledgement message ID (SR10)</td> <td data-bbox="783 887 1262 976">The GUID of the Application Acknowledgement</td> </tr> <tr> <td data-bbox="304 976 783 1032">Process failure point (SR15)</td> <td data-bbox="783 976 1262 1032">20</td> </tr> <tr> <td data-bbox="304 1032 783 1122">Process failure point date/time (SR16)</td> <td data-bbox="783 1032 1262 1122"><i>current date and time</i></td> </tr> <tr> <td data-bbox="304 1122 783 1178">Failure type (SR18)</td> <td data-bbox="783 1122 1262 1178">3</td> </tr> <tr> <td data-bbox="304 1178 783 1379">Error code (SR19)</td> <td data-bbox="783 1178 1262 1379"> <i>The response code from PDS e.g. 500, 404.</i>   <i>NB Use the PDS error rather than the HTTP error where possible.</i> </td> </tr> <tr> <td data-bbox="304 1379 783 1473">Error description (SR20)</td> <td data-bbox="783 1379 1262 1473">The error description from PDS e.g. "Server error"</td> </tr> </tbody> </table>	Field name	Value	EHR Request Acknowledgement date/time (SR8)	<i>current date and time</i>	EHR Request Acknowledgement detail sent (SR9)	20	EHR Request Acknowledgement message ID (SR10)	The GUID of the Application Acknowledgement	Process failure point (SR15)	20	Process failure point date/time (SR16)	<i>current date and time</i>	Failure type (SR18)	3	Error code (SR19)	<i>The response code from PDS e.g. 500, 404.</i>  <i>NB Use the PDS error rather than the HTTP error where possible.</i>	Error description (SR20)	The error description from PDS e.g. "Server error"	MUST
Field name	Value																			
EHR Request Acknowledgement date/time (SR8)	<i>current date and time</i>																			
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Error description (SR20)	The error description from PDS e.g. "Server error"																			
TD51.4.3	<p>If the PDS Retrieval is successful the Sending system <b>shall</b> extract the patient's current GP Practice's ODS code as identified below.</p> <table border="1" data-bbox="304 1570 1262 1854"> <thead> <tr> <th data-bbox="304 1570 488 1626">Data Field</th> <th data-bbox="488 1570 1262 1626">Node path</th> </tr> </thead> <tbody> <tr> <td data-bbox="304 1626 488 1854">Current healthcare provider (GP practice)</td> <td data-bbox="488 1626 1262 1854">           / PdsRetrieval /subject /patientRole/patientPerson            /playedOtherProviderPatient /subjectOf/patientCareProvision            /code[@code=1]/../responsibleParty            /healthCareProvider/id/@extension         </td> </tr> </tbody> </table>	Data Field	Node path	Current healthcare provider (GP practice)	/ PdsRetrieval /subject /patientRole/patientPerson /playedOtherProviderPatient /subjectOf/patientCareProvision /code[@code=1]/../responsibleParty /healthCareProvider/id/@extension	MUST														
Data Field	Node path																			
Current healthcare provider (GP practice)	/ PdsRetrieval /subject /patientRole/patientPerson /playedOtherProviderPatient /subjectOf/patientCareProvision /code[@code=1]/../responsibleParty /healthCareProvider/id/@extension																			

Req ID	Requirement Text	Priority												
TD51.4.4	<p>After the Sending system has extracted the ODS code from the PDS Retrieval, it <b>shall</b> compare this value with the ODS code of the Requesting system. If either the ODS code in the PDS retrieval is null or the two codes do not match, the Sending system <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>• Send a negative Application Acknowledgement to the Requesting system with Response code 19</li> <li>• Record the error in the system audit trail</li> <li>• Record Management Information as follows:</li> </ul> <table border="1"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>EHR Request Acknowledgement date/time (SR8)</td> <td><i>current date and time</i></td> </tr> <tr> <td>EHR Request Acknowledgement detail sent (SR9)</td> <td>19</td> </tr> <tr> <td>EHR Request Acknowledgement message ID (SR10)</td> <td>The GUID of the Application Acknowledgement</td> </tr> <tr> <td>Process failure point (SR15)</td> <td>20</td> </tr> <tr> <td>Process failure point date/time (SR16)</td> <td><i>current date and time</i></td> </tr> </tbody> </table>	Field name	Value	EHR Request Acknowledgement date/time (SR8)	<i>current date and time</i>	EHR Request Acknowledgement detail sent (SR9)	19	EHR Request Acknowledgement message ID (SR10)	The GUID of the Application Acknowledgement	Process failure point (SR15)	20	Process failure point date/time (SR16)	<i>current date and time</i>	MUST
Field name	Value													
EHR Request Acknowledgement date/time (SR8)	<i>current date and time</i>													
EHR Request Acknowledgement detail sent (SR9)	19													
EHR Request Acknowledgement message ID (SR10)	The GUID of the Application Acknowledgement													
Process failure point (SR15)	20													
Process failure point date/time (SR16)	<i>current date and time</i>													

### 6.3 Step 2: Build EHR Extract

Providing Step 1 does not result in a negative Application Acknowledgement, the Sending system proceeds to build the EHR Extract for the patient. This process must be fully automated with any previous functionality to allow user intervention (e.g. Auto Extract in 1.1a) removed. The Sending system will check the validity of the EHR Extract once it is built.

Req ID	Requirement Text	Priority
TD52	If the Sending system has not sent a negative Application Acknowledgement at any point in the previous steps, it <b>shall</b> now build an EHR Extract from the patient's EPR.	MUST

Req ID	Requirement Text	Priority												
TD52.1	<p>When the Sending system has created the EHR Extract, it <b>shall</b> check the validity of the EHR Extract by validating it against the appropriate message schema. If this check fail, the Sending system <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>• Send a negative Application Acknowledgement to the Requesting system with Response code 21</li> <li>• Record the error in the system audit trail</li> <li>• Record Management Information as follows:</li> </ul> <table border="1" data-bbox="284 680 1225 1160"> <thead> <tr> <th data-bbox="284 680 754 734">Field name</th> <th data-bbox="754 680 1225 734">Value</th> </tr> </thead> <tbody> <tr> <td data-bbox="284 734 754 831">EHR Request Acknowledgement date/time (SR8)</td> <td data-bbox="754 734 1225 831"><i>current date and time</i></td> </tr> <tr> <td data-bbox="284 831 754 927">EHR Request Acknowledgement detail sent (SR9)</td> <td data-bbox="754 831 1225 927">21</td> </tr> <tr> <td data-bbox="284 927 754 1023">EHR Request Acknowledgement message ID (SR10)</td> <td data-bbox="754 927 1225 1023">The GUID of the Application Acknowledgement</td> </tr> <tr> <td data-bbox="284 1023 754 1077">Process failure point (SR15)</td> <td data-bbox="754 1023 1225 1077">60</td> </tr> <tr> <td data-bbox="284 1077 754 1160">Process failure point date/time (SR16)</td> <td data-bbox="754 1077 1225 1160"><i>current date and time</i></td> </tr> </tbody> </table>	Field name	Value	EHR Request Acknowledgement date/time (SR8)	<i>current date and time</i>	EHR Request Acknowledgement detail sent (SR9)	21	EHR Request Acknowledgement message ID (SR10)	The GUID of the Application Acknowledgement	Process failure point (SR15)	60	Process failure point date/time (SR16)	<i>current date and time</i>	MUST
Field name	Value													
EHR Request Acknowledgement date/time (SR8)	<i>current date and time</i>													
EHR Request Acknowledgement detail sent (SR9)	21													
EHR Request Acknowledgement message ID (SR10)	The GUID of the Application Acknowledgement													
Process failure point (SR15)	60													
Process failure point date/time (SR16)	<i>current date and time</i>													
TD52.2	<p>If the Sending system fails to create the EHR Extract, it shall take the following actions:</p> <ul style="list-style-type: none"> <li>• Send a negative Application Acknowledgement to the Requesting system with Response code 10</li> <li>• Record the error in the system audit trail</li> <li>• Record Management Information as follows:</li> </ul> <table border="1" data-bbox="284 1464 1225 1933"> <thead> <tr> <th data-bbox="284 1464 754 1518">Field name</th> <th data-bbox="754 1464 1225 1518">Value</th> </tr> </thead> <tbody> <tr> <td data-bbox="284 1518 754 1615">EHR Request Acknowledgement date/time (SR8)</td> <td data-bbox="754 1518 1225 1615"><i>current date and time</i></td> </tr> <tr> <td data-bbox="284 1615 754 1711">EHR Request Acknowledgement detail sent (SR9)</td> <td data-bbox="754 1615 1225 1711">10</td> </tr> <tr> <td data-bbox="284 1711 754 1807">EHR Request Acknowledgement message ID (SR10)</td> <td data-bbox="754 1711 1225 1807">The GUID of the Application Acknowledgement</td> </tr> <tr> <td data-bbox="284 1807 754 1861">Process failure point (SR15)</td> <td data-bbox="754 1807 1225 1861">60</td> </tr> <tr> <td data-bbox="284 1861 754 1933">Process failure point date/time (SR16)</td> <td data-bbox="754 1861 1225 1933"><i>current date and time</i></td> </tr> </tbody> </table>	Field name	Value	EHR Request Acknowledgement date/time (SR8)	<i>current date and time</i>	EHR Request Acknowledgement detail sent (SR9)	10	EHR Request Acknowledgement message ID (SR10)	The GUID of the Application Acknowledgement	Process failure point (SR15)	60	Process failure point date/time (SR16)	<i>current date and time</i>	MUST
Field name	Value													
EHR Request Acknowledgement date/time (SR8)	<i>current date and time</i>													
EHR Request Acknowledgement detail sent (SR9)	10													
EHR Request Acknowledgement message ID (SR10)	The GUID of the Application Acknowledgement													
Process failure point (SR15)	60													
Process failure point date/time (SR16)	<i>current date and time</i>													

Req ID	Requirement Text	Priority
TD52.3	Sending systems <b>must</b> include all attachments additional to the HL7 payload within external MIME parts, therefore attachments <b>must not</b> be included in-line within the HL7 content.	MUST
TD52.4	Sending systems <b>must</b> send all attachments base 64 encoded with appropriate MIME header.	MUST

## 6.4 Step 3: Determine whether Large Messaging is to be used

Once the EHR Extract has been successfully built and validated (step 2), the Sending system proceeds to check the EHR Extract against the Spine constraints. These constraints are stored as configuration items, accessible by supplier support staff only. (see GP2GP R2.2 Requirements Specification [Ref: 1] for details.) If any of the constraints are breached, the transfer of the EHR Extract needs to use Large Messaging (see Supp Spec: Handling Large Messages [Ref: 13]).

If Large Messaging is required then support for the Large Messaging Protocol in the Sending and Requesting systems must be checked before Proceeding.

The Sending system will check its own configuration to determine if Large Messaging is supported and enabled. If it is not supported the GP2GP Transfer will END, Management Information recorded and a negative Application Acknowledgement sent to the Requesting Practice unless the only reason that the EHR Extract needs to be sent using Large Messaging are because some attachments are not supported within the EHR Extract message itself, i.e. everything else can be sent within the EHR Extract message.

The Sending system will check whether the Requesting system supports Large Messaging by checking for the existence of the Common Point to Point message in the Requesting system's Accredited System entry in SDS. The SDS query will use the GP Practice Code (ODS code) of the Requesting system as the value for the *nhsIDCode* in the LDAP search filter to retrieve details from the Accredited System entry. If the only reason for using Large Messaging is to send attachments which have TMS unsupported MIME types, the Sending system can defer to sending placeholders for these attachments and not use Large Messaging. If the SDS query fails or the Requesting system does not support Large Messaging and it is needed for other reasons, the Sending system will send a negative Application Acknowledgement and the GP2GP Transfer Process will END.

Req ID	Requirement Text	Priority
TD53	<p>When the Sending system has created the EHR Extract, it <b>shall</b> check the validity of the EHR Extract against the Spine limitations configuration settings (see GP2GP R2.2 Requirements Specification [Ref: 1] TMS limitations - max attachment size, max message size, max number of attachments and supported MIME application/type extensions) and if the EHR Extract exceeds any of these, the Sending system <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>• Check the Sending system supports Large Messaging locally</li> <li>• Check the Requesting system supports Large Messaging by querying SDS</li> </ul> <p>The following requirements detail the steps required.</p>	MUST
TD53.1	<p>If ANY of the Spine constraints (as configured within the Sending system) are breached, the Sending system <b>shall</b> record Management Information as follows:</p>	MUST

Req ID	Requirement Text	Priority								
	<ul style="list-style-type: none"> <li>Large Messaging (SR24) = 1 (Required)</li> </ul>									
TD53.1.1	<p>The following checks <b>shall</b> be performed and if true will require Large Messaging to be used:</p> <ul style="list-style-type: none"> <li>If the core HL7 payload of the EHR Extract exceeds the max HL7 payload size</li> <li>If the EHR Extract Message including all attachments exceeds the max TMS message size</li> <li>If any single attachment exceeds max individual attachment size</li> <li>If the number of attachments exceeds the max number of attachments value</li> <li>If one of more attachment file type is not supported by TMS if included as an attachment within the EHR Extract message.</li> </ul>	MUST								
TD53.2	<p>If NONE of the Spine constraints (as configured within the Sending system) are breached the following Management Information <b>shall</b> be recorded:</p> <ul style="list-style-type: none"> <li>Large Messaging (SR24) = 0 (Not Required)</li> </ul>	MUST								
TD53.3	<p>If Large Messaging is required the Sending system <b>shall</b> check its own configuration settings to determine if it supports Large Messaging via the Common Point to Point messages.</p>	MUST								
TD53.3.1	<p>If the Sending system does not support Large Messages and Large Messaging is required for something other than unsupported MIME types, the system <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>Send a negative Application Acknowledgement to the Requesting system with Response code 23</li> <li>Record the error in the system audit trail</li> <li>Record Management Information as follows:</li> </ul> <table border="1" data-bbox="304 1592 1233 2045"> <thead> <tr> <th data-bbox="304 1592 770 1641">Field name</th> <th data-bbox="770 1592 1233 1641">Value</th> </tr> </thead> <tbody> <tr> <td data-bbox="304 1641 770 1865">Application Status (HR5)</td> <td data-bbox="770 1641 1233 1865">                     1000000000000000                      (2<sup>nd</sup> byte indicates Large Message not supported)                      NB – Other bytes should be set to 0, 1 or 2 as determined.                 </td> </tr> <tr> <td data-bbox="304 1865 770 1955">EHR Request Acknowledgement date/time (SR8)</td> <td data-bbox="770 1865 1233 1955">Current date and time</td> </tr> <tr> <td data-bbox="304 1955 770 2045">EHR Request Acknowledgement detail sent (SR9)</td> <td data-bbox="770 1955 1233 2045">23</td> </tr> </tbody> </table>	Field name	Value	Application Status (HR5)	1000000000000000 (2 <sup>nd</sup> byte indicates Large Message not supported) NB – Other bytes should be set to 0, 1 or 2 as determined.	EHR Request Acknowledgement date/time (SR8)	Current date and time	EHR Request Acknowledgement detail sent (SR9)	23	MUST
Field name	Value									
Application Status (HR5)	1000000000000000 (2 <sup>nd</sup> byte indicates Large Message not supported) NB – Other bytes should be set to 0, 1 or 2 as determined.									
EHR Request Acknowledgement date/time (SR8)	Current date and time									
EHR Request Acknowledgement detail sent (SR9)	23									

Req ID	Requirement Text		Priority														
	EHR Request Acknowledgement message ID (SR10)	The GUID of the Application Acknowledgement															
	Process failure point (SR15)	50															
	Process failure point date/time (SR16)	<i>current date and time</i>															
	Failure type (SR18)	2															
TD53.3.2	<p>If the Sending system does not support Large Messages and Large Messaging is <b>ONLY</b> required to allow unsupported MIME types to be sent, the system <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>Do not attempt to send attachments with unsupported MIME types via Large Messaging.</li> <li>Send placeholders in the EHR Extract message in place of the attachment (See Supp Spec: Attachment References [Ref: 9])</li> </ul>																
TD53.3.3	<p>If the Sending system supports Large Messages but the functionality is disabled, it <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>Send a negative Application Acknowledgement to the Requesting system with Response code 23</li> <li>Record the error in the system audit trail</li> <li>Record Management Information as follows:</li> </ul> <table border="1" data-bbox="304 1317 1233 2018"> <thead> <tr> <th data-bbox="304 1317 770 1368">Field name</th> <th data-bbox="770 1317 1233 1368">Value</th> </tr> </thead> <tbody> <tr> <td data-bbox="304 1368 770 1585">Application Status (HR5)</td> <td data-bbox="770 1368 1233 1585">1200000000000000 <i>(2<sup>nd</sup> byte indicates Large Message not enabled)</i> <i>NB – Other bytes should be set to 0, 1 or 2 as determined.</i></td> </tr> <tr> <td data-bbox="304 1585 770 1682">EHR Request Acknowledgement date/time (SR8)</td> <td data-bbox="770 1585 1233 1682"><i>Current date and time</i></td> </tr> <tr> <td data-bbox="304 1682 770 1778">EHR Request Acknowledgement detail sent (SR9)</td> <td data-bbox="770 1682 1233 1778">23</td> </tr> <tr> <td data-bbox="304 1778 770 1874">EHR Request Acknowledgement message ID (SR10)</td> <td data-bbox="770 1778 1233 1874">The GUID of the Application Acknowledgement</td> </tr> <tr> <td data-bbox="304 1874 770 1926">Process failure point (SR15)</td> <td data-bbox="770 1874 1233 1926">50</td> </tr> <tr> <td data-bbox="304 1926 770 2018">Process failure point date/time (SR16)</td> <td data-bbox="770 1926 1233 2018"><i>current date and time</i></td> </tr> </tbody> </table>		Field name	Value	Application Status (HR5)	1200000000000000 <i>(2<sup>nd</sup> byte indicates Large Message not enabled)</i> <i>NB – Other bytes should be set to 0, 1 or 2 as determined.</i>	EHR Request Acknowledgement date/time (SR8)	<i>Current date and time</i>	EHR Request Acknowledgement detail sent (SR9)	23	EHR Request Acknowledgement message ID (SR10)	The GUID of the Application Acknowledgement	Process failure point (SR15)	50	Process failure point date/time (SR16)	<i>current date and time</i>	MUST
Field name	Value																
Application Status (HR5)	1200000000000000 <i>(2<sup>nd</sup> byte indicates Large Message not enabled)</i> <i>NB – Other bytes should be set to 0, 1 or 2 as determined.</i>																
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Process failure point date/time (SR16)	<i>current date and time</i>																

Req ID	Requirement Text	Priority				
	<table border="1"> <tr> <td>Failure type (SR18)</td> <td>2</td> </tr> </table>	Failure type (SR18)	2			
Failure type (SR18)	2					
TD53.3.4	<p>If the Sending system does support Large Messages, it <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>Record Management Information as follows:</li> </ul> <table border="1"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Application Status (HR5)</td> <td>1100000000000000 (2<sup>nd</sup> byte indicates Large Message supported) NB – Other bytes should be set to 0, 1 or 2 as determined.</td> </tr> </tbody> </table>	Field name	Value	Application Status (HR5)	1100000000000000 (2 <sup>nd</sup> byte indicates Large Message supported) NB – Other bytes should be set to 0, 1 or 2 as determined.	MUST
Field name	Value					
Application Status (HR5)	1100000000000000 (2 <sup>nd</sup> byte indicates Large Message supported) NB – Other bytes should be set to 0, 1 or 2 as determined.					
TD53.4	<p>If the Sending system supports Large Messages it <b>shall</b> check whether the Requesting system does by querying SDS using the following LDAP query:</p> <pre>ldapsearch -h ldap.spine.nhs.uk -b "ou=services, o=nhs" "&amp;(nhsIDCode=P83023) (objectClass=nhsAs) (nhsAsSvcIA=urn:nhs:names:services:gp2gp:COPC_IN000001UK01))"</pre> <p><i>uniqueIdentifier nhsMhsPartyKey</i></p> <p>Note: Carriage returns are indicative of formatting of this document.</p> <p>The Sending system <b>shall</b> replace the <i>nhsIDCode</i> parameter value in the above LDAP query with the value of the Practice (ODS) code of the Requesting system.</p> <p>If the Sending system needs to utilise a different query, the supplier <b>shall</b> obtain permission to do this from the Authority, specifically consulting the GP2GP programme.</p>	MUST				
TD53.4.1	<p>If the LDAP query returns 0 results and Large Messaging is required ONLY to support the sending of unsupported MIME types the system <b>shall</b>:</p> <ul style="list-style-type: none"> <li>Not attempt to send attachments with unsupported MIME types via Large Messaging.</li> <li>Send placeholders in the EHR Extract message in place of the attachment (See Supp Spec: Attachment References [Ref: 9])</li> <li>Record the error in the system audit trail</li> <li>Record Management Information as follows:</li> </ul> <table border="1"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Requesting practice configuration</td> <td>0000000000</td> </tr> </tbody> </table>	Field name	Value	Requesting practice configuration	0000000000	MUST
Field name	Value					
Requesting practice configuration	0000000000					



Req ID	Requirement Text	Priority														
	(SR6) (1 <sup>st</sup> byte indicates lack of Large Message support) NB – Other bytes should be set to 0, 1 or 2 as determined.															
TD53.4.2	If the LDAP query returns 0 results and Large Messaging is required for other reasons the Sending system <b>shall</b> : <ul style="list-style-type: none"> <li>• Send a negative Application Acknowledgement to the Requesting system with Response code 14</li> <li>• Record the error in the system audit trail</li> <li>• Record Management Information as follows:</li> </ul> <table border="1" data-bbox="304 819 1230 1473"> <thead> <tr> <th data-bbox="304 819 767 869">Field name</th> <th data-bbox="767 819 1230 869">Value</th> </tr> </thead> <tbody> <tr> <td data-bbox="304 869 767 1088">Requesting practice configuration (SR6)</td> <td data-bbox="767 869 1230 1088">0000000000 (1<sup>st</sup> byte indicates lack of Large Message support) NB – Other bytes should be set to 0, 1 or 2 as determined.</td> </tr> <tr> <td data-bbox="304 1088 767 1182">EHR Request Acknowledgement date/time (SR8)</td> <td data-bbox="767 1088 1230 1182"><i>Current date and time</i></td> </tr> <tr> <td data-bbox="304 1182 767 1276">EHR Request Acknowledgement detail sent (SR9)</td> <td data-bbox="767 1182 1230 1276">14</td> </tr> <tr> <td data-bbox="304 1276 767 1370">EHR Request Acknowledgement message ID (SR10)</td> <td data-bbox="767 1276 1230 1370">The GUID of the Application Acknowledgement</td> </tr> <tr> <td data-bbox="304 1370 767 1420">Process failure point (SR15)</td> <td data-bbox="767 1370 1230 1420">50</td> </tr> <tr> <td data-bbox="304 1420 767 1473">Failure point Date/time (SR16)</td> <td data-bbox="767 1420 1230 1473"><i>Current date and time</i></td> </tr> </tbody> </table>	Field name	Value	Requesting practice configuration (SR6)	0000000000 (1 <sup>st</sup> byte indicates lack of Large Message support) NB – Other bytes should be set to 0, 1 or 2 as determined.	EHR Request Acknowledgement date/time (SR8)	<i>Current date and time</i>	EHR Request Acknowledgement detail sent (SR9)	14	EHR Request Acknowledgement message ID (SR10)	The GUID of the Application Acknowledgement	Process failure point (SR15)	50	Failure point Date/time (SR16)	<i>Current date and time</i>	MUST
Field name	Value															
Requesting practice configuration (SR6)	0000000000 (1 <sup>st</sup> byte indicates lack of Large Message support) NB – Other bytes should be set to 0, 1 or 2 as determined.															
EHR Request Acknowledgement date/time (SR8)	<i>Current date and time</i>															
EHR Request Acknowledgement detail sent (SR9)	14															
EHR Request Acknowledgement message ID (SR10)	The GUID of the Application Acknowledgement															
Process failure point (SR15)	50															
Failure point Date/time (SR16)	<i>Current date and time</i>															
TD53.4.3	If the LDAP query returns 1 result the Sending system <b>shall</b> take the following actions: <ul style="list-style-type: none"> <li>• Record the error in the system audit trail</li> <li>• Record Management Information as follows:</li> </ul> <table border="1" data-bbox="304 1682 1230 1951"> <thead> <tr> <th data-bbox="304 1682 767 1731">Field name</th> <th data-bbox="767 1682 1230 1731">Value</th> </tr> </thead> <tbody> <tr> <td data-bbox="304 1731 767 1951">Requesting practice configuration (SR6)</td> <td data-bbox="767 1731 1230 1951">1000000000 (1<sup>st</sup> byte indicates Large Message support) NB – Other bytes should be set to 0, 1 or 2 as determined.</td> </tr> </tbody> </table>	Field name	Value	Requesting practice configuration (SR6)	1000000000 (1 <sup>st</sup> byte indicates Large Message support) NB – Other bytes should be set to 0, 1 or 2 as determined.	MUST										
Field name	Value															
Requesting practice configuration (SR6)	1000000000 (1 <sup>st</sup> byte indicates Large Message support) NB – Other bytes should be set to 0, 1 or 2 as determined.															
TD53.4.4	If the LDAP query returns 2 or more results the Sending system <b>shall</b> take the following actions:	MUST														

Req ID	Requirement Text	Priority														
	<ul style="list-style-type: none"> <li>Send a negative Application Acknowledgement to the Requesting system with Response code 24</li> <li>Record the error in the system audit trail</li> <li>Record Management Information as follows:</li> </ul> <table border="1"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Requesting practice configuration (SR6)</td> <td>1000000000 (1<sup>st</sup> byte indicates Large Message support) NB – Other bytes should be set to 0, 1 or 2 as determined.</td> </tr> <tr> <td>EHR Request Acknowledgement date/time (SR8)</td> <td><i>Current date and time</i></td> </tr> <tr> <td>EHR Request Acknowledgement detail sent (SR9)</td> <td>24</td> </tr> <tr> <td>EHR Request Acknowledgement message ID (SR10)</td> <td>The GUID of the Application Acknowledgement</td> </tr> <tr> <td>Process failure point (SR15)</td> <td>50</td> </tr> <tr> <td>Failure point Date/time (SR16)</td> <td><i>Current date and time</i></td> </tr> </tbody> </table>	Field name	Value	Requesting practice configuration (SR6)	1000000000 (1 <sup>st</sup> byte indicates Large Message support) NB – Other bytes should be set to 0, 1 or 2 as determined.	EHR Request Acknowledgement date/time (SR8)	<i>Current date and time</i>	EHR Request Acknowledgement detail sent (SR9)	24	EHR Request Acknowledgement message ID (SR10)	The GUID of the Application Acknowledgement	Process failure point (SR15)	50	Failure point Date/time (SR16)	<i>Current date and time</i>	
Field name	Value															
Requesting practice configuration (SR6)	1000000000 (1 <sup>st</sup> byte indicates Large Message support) NB – Other bytes should be set to 0, 1 or 2 as determined.															
EHR Request Acknowledgement date/time (SR8)	<i>Current date and time</i>															
EHR Request Acknowledgement detail sent (SR9)	24															
EHR Request Acknowledgement message ID (SR10)	The GUID of the Application Acknowledgement															
Process failure point (SR15)	50															
Failure point Date/time (SR16)	<i>Current date and time</i>															

## 6.5 Step 5: Send the EHR Extract

### 6.5.1 Determine EHR Extract MIM Version

Before creating the EHR Extract from the patient's record, the MIM version of the EHR Request will be determined. If the EHR Request is a DMS 1 interaction, then the Sending system will respond with a DMS 1 EHR Extract. If the EHR Request message is a MIM 3 version then the Sending system will always respond with a MIM 3 EHR Extract (with or without Large Messaging as determined by mutual support).

Req ID	Requirement Text	Priority				
TD54	<p>If the EHR Request is a DMS 1 message and the Sending system supports a DMS 1 EHR Extract message then it <b>shall</b> respond with a DMS 1 EHR Extract message. If the EHR Request is a MIM 3 message the Sending systems <b>shall</b> respond with a MIM 3 EHR Extract message.</p> <p>The Sending system <b>shall</b> update the Management Information as follows:</p> <table border="1"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Requesting practice configuration</td> <td>[0/1]x00000000</td> </tr> </tbody> </table>	Field name	Value	Requesting practice configuration	[0/1]x00000000	MUST
Field name	Value					
Requesting practice configuration	[0/1]x00000000					

Req ID	Requirement Text	Priority																		
	(SR6)  set x to 0 if a MIM 3 EHR Extract was returned or set x to 1 if a DMS 1 EHR Extract was returned.  <i>(2<sup>nd</sup> byte indicates Archetypes requirements support, 1<sup>st</sup> byte should already be recorded)</i>  NB – Other bytes should be set to 0, 1 or 2 as determined.																			
TD55	If the Sending system is unable to send the EHR Extract or TMS returns a failure message (e.g. ebXML error or negative Application Acknowledgement) the system shall take the following actions: <ul style="list-style-type: none"> <li>• Send a negative Application Acknowledgement for the EHR Request to the Requesting system with Response code 20</li> <li>• Record the error in the system audit trail</li> <li>• Record Management Information as follows:</li> </ul> <table border="1" data-bbox="280 1048 1222 1688"> <thead> <tr> <th data-bbox="280 1048 753 1099">Field name</th> <th data-bbox="753 1048 1222 1099">Value</th> </tr> </thead> <tbody> <tr> <td data-bbox="280 1099 753 1196">EHR Request Acknowledgement date/time (SR8)</td> <td data-bbox="753 1099 1222 1196"><i>current date and time</i></td> </tr> <tr> <td data-bbox="280 1196 753 1292">EHR Request Acknowledgement detail sent (SR9)</td> <td data-bbox="753 1196 1222 1292">20</td> </tr> <tr> <td data-bbox="280 1292 753 1388">EHR Request Acknowledgement message ID (SR10)</td> <td data-bbox="753 1292 1222 1388">The GUID of the Application Acknowledgement</td> </tr> <tr> <td data-bbox="280 1388 753 1440">Process failure point (SR15)</td> <td data-bbox="753 1388 1222 1440">60</td> </tr> <tr> <td data-bbox="280 1440 753 1491">Failure point Date/time (SR16)</td> <td data-bbox="753 1440 1222 1491">Current date and time</td> </tr> <tr> <td data-bbox="280 1491 753 1543">Failure type (SR18)</td> <td data-bbox="753 1491 1222 1543">4</td> </tr> <tr> <td data-bbox="280 1543 753 1594">Error code (SR19)</td> <td data-bbox="753 1543 1222 1594">20</td> </tr> <tr> <td data-bbox="280 1594 753 1688">Error description (SR20)</td> <td data-bbox="753 1594 1222 1688">Insert the response text from Response code 20</td> </tr> </tbody> </table>	Field name	Value	EHR Request Acknowledgement date/time (SR8)	<i>current date and time</i>	EHR Request Acknowledgement detail sent (SR9)	20	EHR Request Acknowledgement message ID (SR10)	The GUID of the Application Acknowledgement	Process failure point (SR15)	60	Failure point Date/time (SR16)	Current date and time	Failure type (SR18)	4	Error code (SR19)	20	Error description (SR20)	Insert the response text from Response code 20	MUST
Field name	Value																			
EHR Request Acknowledgement date/time (SR8)	<i>current date and time</i>																			
EHR Request Acknowledgement detail sent (SR9)	20																			
EHR Request Acknowledgement message ID (SR10)	The GUID of the Application Acknowledgement																			
Process failure point (SR15)	60																			
Failure point Date/time (SR16)	Current date and time																			
Failure type (SR18)	4																			
Error code (SR19)	20																			
Error description (SR20)	Insert the response text from Response code 20																			

## 6.6 Step 6: Send Large Messages

When the Sending system receives the Common Point to Point “Continue” message from the Requesting system, it will begin to send the Common Point to Point Large Messages.

The Sending system can choose to send the Common Point to Point messages in any manner it prefers to meet the maximum sending time requirements described in the GP2GP R2.2

Requirements Specification [Ref: 1]. It is not necessary to wait for each message to be acknowledged before sending the next.

The Sending system will continue to send to TMS until there are no more Common Point to Point messages to send.

Req ID	Requirement Text	Priority								
TD56	When the Sending system and Requesting system have been confirmed as both supporting Large Messages, the Sending system <b>shall</b> split the EHR Extract according to the requirements specified in Handling Large Messages [Ref: 13].	MUST								
TD57	On receiving a Common Point to Point “continue” message in response to the EHR Extract Message, the Sending system <b>shall</b> send any Common Point to Point messages that form part of the EHR Extract.  Note: The system does not need to wait for responses to each Common Point to Point message before sending the next one.	MUST								
TD58	On receiving a negative Application Acknowledgement to a Common Point to Point “continue” message, the Sending system <b>shall</b> update the Management Information as follows: <table border="1" data-bbox="260 1070 1214 1283"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Process failure point (SR15)</td> <td>60</td> </tr> <tr> <td>Failure point Date/time (SR16)</td> <td><i>Current date and time</i></td> </tr> <tr> <td>Failure type (SR18)</td> <td><i>Null</i></td> </tr> </tbody> </table>	Field name	Value	Process failure point (SR15)	60	Failure point Date/time (SR16)	<i>Current date and time</i>	Failure type (SR18)	<i>Null</i>	MUST
Field name	Value									
Process failure point (SR15)	60									
Failure point Date/time (SR16)	<i>Current date and time</i>									
Failure type (SR18)	<i>Null</i>									
TD59	On completion of sending each Common Point to Point message, counting each message containing an attachment fragment as an individual message, the Sending system <b>shall</b> update the status of the message and update the following Management Information: <table border="1" data-bbox="260 1464 1214 2002"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Total number of Large Message Common Point to Point fragments (SR25)</td> <td><i>Total number of Common Point to Point messages</i></td> </tr> <tr> <td>Total number of Large Message Common Point to Point fragments successfully accepted by TMS fragments (SR26)</td> <td><i>Total number of Common Point to Point messages sent</i></td> </tr> <tr> <td>Total number of Large Message Common Point to Point fragments positively acknowledged recipient (SR27)</td> <td><i>Total number of Common Point to Point messages positively received</i></td> </tr> </tbody> </table>	Field name	Value	Total number of Large Message Common Point to Point fragments (SR25)	<i>Total number of Common Point to Point messages</i>	Total number of Large Message Common Point to Point fragments successfully accepted by TMS fragments (SR26)	<i>Total number of Common Point to Point messages sent</i>	Total number of Large Message Common Point to Point fragments positively acknowledged recipient (SR27)	<i>Total number of Common Point to Point messages positively received</i>	MUST
Field name	Value									
Total number of Large Message Common Point to Point fragments (SR25)	<i>Total number of Common Point to Point messages</i>									
Total number of Large Message Common Point to Point fragments successfully accepted by TMS fragments (SR26)	<i>Total number of Common Point to Point messages sent</i>									
Total number of Large Message Common Point to Point fragments positively acknowledged recipient (SR27)	<i>Total number of Common Point to Point messages positively received</i>									

Req ID	Requirement Text	Priority																		
TD60	The Sending system <b>shall</b> track received Application Acknowledgements for messages containing attachment fragments and update the received status of the attachment once it has received acknowledgements for all of them, i.e. indicating reassembly success/failure by the Requesting system.																			
TD61	<p>If the Sending system is unable to send any of the Common Point to Point messages or TMS returns a failure message for any of them (e.g. ebXML error or negative Application Acknowledgement) the system shall take the following actions:</p> <ul style="list-style-type: none"> <li>Send a negative Application Acknowledgement for the EHR Request to the Requesting system with Response code 20</li> <li>Record the error in the system audit trail</li> <li>Record Management Information as follows:</li> </ul> <table border="1"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>EHR Request Acknowledgement date/time (SR8)</td> <td><i>current date and time</i></td> </tr> <tr> <td>EHR Request Acknowledgement detail sent (SR9)</td> <td>20</td> </tr> <tr> <td>EHR Request Acknowledgement message ID (SR10)</td> <td>The GUID of the Application Acknowledgement</td> </tr> <tr> <td>Process failure point (SR15)</td> <td>60</td> </tr> <tr> <td>Failure point Date/time (SR16)</td> <td>Current date and time</td> </tr> <tr> <td>Failure type (SR18)</td> <td>4</td> </tr> <tr> <td>Error code (SR19)</td> <td>20</td> </tr> <tr> <td>Error description (SR20)</td> <td>Insert the response text from Response code 20</td> </tr> </tbody> </table>	Field name	Value	EHR Request Acknowledgement date/time (SR8)	<i>current date and time</i>	EHR Request Acknowledgement detail sent (SR9)	20	EHR Request Acknowledgement message ID (SR10)	The GUID of the Application Acknowledgement	Process failure point (SR15)	60	Failure point Date/time (SR16)	Current date and time	Failure type (SR18)	4	Error code (SR19)	20	Error description (SR20)	Insert the response text from Response code 20	MUST
Field name	Value																			
EHR Request Acknowledgement date/time (SR8)	<i>current date and time</i>																			
EHR Request Acknowledgement detail sent (SR9)	20																			
EHR Request Acknowledgement message ID (SR10)	The GUID of the Application Acknowledgement																			
Process failure point (SR15)	60																			
Failure point Date/time (SR16)	Current date and time																			
Failure type (SR18)	4																			
Error code (SR19)	20																			
Error description (SR20)	Insert the response text from Response code 20																			

## 6.7 Step 7: Return a positive Application Acknowledgement to MIM 3 EHR Request

If the Sending system has sent a MIM 3 EHR Extract message it needs to also send a positive Application Acknowledgement for the associated EHR Request message. Under GP2GP 2.2 this Application Acknowledgement is sent after the Sending system has determined whether the EHR Extract, including any Large Messages, have been successfully sent to TMS.

If the Sending system has sent a DMS 1 EHR Extract message it will NOT send an Application Acknowledgement for the EHR Request.

Req ID	Requirement Text	Priority								
TD62	<p>If the Sending system has sent a MIM 3 EHR Extract message it <b>shall</b> wait for the TMS ebXML acknowledgement response for the EHR Extract and all associated Common Point to Point messages. If ALL are successful it <b>shall</b> create and send a positive Application Acknowledgement in response to the original EHR Request message.</p> <p>The following Management Information <b>shall</b> be recorded as follows:</p> <table border="1"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>EHR Request Acknowledgement date/time (SR8)</td> <td><i>current date and time</i></td> </tr> <tr> <td>EHR Request Acknowledgement detail sent (SR9)</td> <td>0</td> </tr> <tr> <td>EHR Request Acknowledgement message ID (SR10)</td> <td>The GUID of the Application Acknowledgement</td> </tr> </tbody> </table>	Field name	Value	EHR Request Acknowledgement date/time (SR8)	<i>current date and time</i>	EHR Request Acknowledgement detail sent (SR9)	0	EHR Request Acknowledgement message ID (SR10)	The GUID of the Application Acknowledgement	MUST
Field name	Value									
EHR Request Acknowledgement date/time (SR8)	<i>current date and time</i>									
EHR Request Acknowledgement detail sent (SR9)	0									
EHR Request Acknowledgement message ID (SR10)	The GUID of the Application Acknowledgement									

## 6.8 Step 8: Receive Application Acknowledgment for the EHR Extract Message

When the Requesting system has received the EHR Extract and any associated Large Messages and determined the success or not of integrating the EHR Extract into the Requesting system it will send an Application Acknowledgement back to the Sending System. As the integration of the record into the Requesting system is user initiated the Application Acknowledgement may not be received for several days- the Sending system needs to recognise this and indicate the status accordingly on the system, i.e. 'awaiting Application Acknowledgement', 'received Application Acknowledgement' and the integration result – success/failure, etc.

Req ID	Requirement Text	Priority				
TD63	<p>When the Sending system receives a positive Application Acknowledgement to the EHR Extract, it <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>Record the error in the system audit trail</li> <li>Update the final status of the EHR Transfer</li> <li>Record Management Information as follows</li> </ul> <table border="1"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Sender conversation closed date/time (SR28)</td> <td><i>Current date and time</i></td> </tr> </tbody> </table>	Field name	Value	Sender conversation closed date/time (SR28)	<i>Current date and time</i>	MUST
Field name	Value					
Sender conversation closed date/time (SR28)	<i>Current date and time</i>					
TD64	<p>When the Sending system receives a negative Application Acknowledgement to the EHR Extract, it <b>shall</b> take the following actions:</p>	MUST				

Req ID	Requirement Text	Priority				
	<ul style="list-style-type: none"> <li>Record the error in the system audit trail</li> <li>Update the final status of the EHR Transfer</li> <li>Record Management Information as follows</li> </ul> <table border="1"> <thead> <tr> <th>Field name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Sender conversation closed date/time (SR28)</td> <td><i>null</i></td> </tr> </tbody> </table>	Field name	Value	Sender conversation closed date/time (SR28)	<i>null</i>	
Field name	Value					
Sender conversation closed date/time (SR28)	<i>null</i>					

## 6.9 Step 9: Manual Re-send of an EHR Extract

The Sending system will support a manual re-send of the EHR Extract where a negative Application Acknowledgement in step 8 was received.

A user must be authenticated with an NHS Smartcard in order to access the 're-send' functionality. This would usually be initiated following a request (e.g. by telephone) by the Practice using the Requesting system.

The Sending system will check that the Requesting system is still the patient's current GP practice by checking the Requesting system's ODS code against the patient's PDS record again and if the check passes the Sending system repeats the EHR Extract sending process described in the following requirements.

Req ID	Requirement Text	Priority
TD65	The Sending system <b>shall</b> support re-send functionality for an EHR Extract for the length of the 'EHR Extract Re-Send Period' from the EHR Request date/time, where a negative Application Acknowledgement has been received to the EHR Extract.	MUST
TD66	<p>When a re-send is initiated the Sending system <b>shall</b> perform the same checks and follow the same processes as if this was triggered by receipt of an EHR Request.</p> <p>The system <b>shall</b> use the original conversation ID but must create new ebXML message IDs and timestamps.</p> <p>The EHR Response message <b>must</b> be a duplicate of the original payload, i.e. contain the same HL7 content which <b>must not</b> be re-extracted from the patient record.</p>	MUST
TD67	<p>When a re-send is initiated at the Sending system, it <b>shall</b> take the following actions:</p> <ul style="list-style-type: none"> <li>Record the error in the system audit trail</li> </ul>	MUST

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Req ID	Requirement Text	Priority				
	<ul style="list-style-type: none"><li>Update the status of the EHR Transfer to indicate the re-send</li></ul>					
TD68	If any errors occur when a re-send is initiated the Sending system <b>shall</b> record the normal Management Information <b>shall</b> update any previous Management Information recorded for this GP2GP Transfer and <b>shall</b> record: <table border="1"><thead><tr><th>Field name</th><th>Value</th></tr></thead><tbody><tr><td>Process failure point (SR15)</td><td>70</td></tr></tbody></table>	Field name	Value	Process failure point (SR15)	70	MUST
Field name	Value					
Process failure point (SR15)	70					



## 7 Spine Interactions

The message interactions between the Requesting GP System and the Sending GP System will be as listed below and the Requesting system and Sending system **shall** support these.

System Role	Interaction	MIM 3 (2.2b or earlier)	DMS 1 (2.2c or later)
Requesting	EHR Request Started	RCMR_IN010000UK05	RCMR_IN010000UK06
Sending	Application Acknowledgement to EHR Request	Positive and Negative MCCI_IN010000UK13	Negative only MCCI_IN010000UK13
Sending	EHR Request Completed (EHR Extract)	RCMR_IN030000UK06	RCMR_IN030000UK08
Requesting	Common Point to Point 'Continue'	COPC_IN000001UK01	COPC_IN000001UK01
Sending	Common Point to Point for Large Messaging	COPC_IN000001UK01	COPC_IN000001UK01
Requesting	Application Acknowledgement to EHR Extract	Positive and Negative MCCI_IN010000UK13	Positive and Negative MCCI_IN010000UK13

These are the standard interactions made between the Requesting GP System and the Sending GP System. Refer to GP2GP Response Codes [Ref: 18] for all available error codes and scenarios. Additional interactions occur in situations where the Large Messaging Protocol is required.

### 7.1 Specific Messaging Behaviour Modes

A GP2GP compliant system must be capable of operating in one of two modes.

#### 7.1.1 Production Mode

This is the normal operating mode in which GP2GP is turned 'ON'. In this mode all message interactions are enabled and the system behaves as per this specification without restriction.

#### 7.1.2 Disabled Mode

This is effectively the mode in which GP2GP is turned 'OFF'. In this mode the system will not support any GP2GP behaviour as specified within any of the GP2GP specifications except that detailed in the following paragraphs.

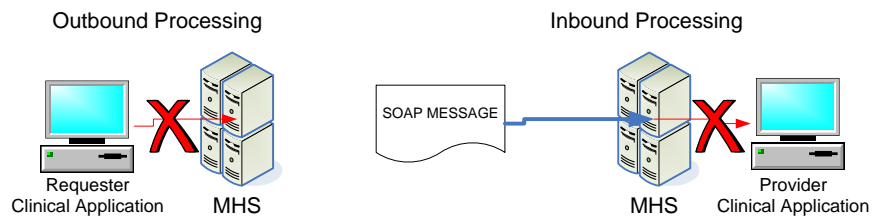
The system **shall** provide the same Patient Registration functions as that offered in GP2GP but without the GP2GP trigger, i.e. the user experience when registering patients **shall** be the same whether GP2GP is 'ON' or 'OFF'

In this mode the MHS must also reject all inbound GP2GP messages, including Common Point to Point messages indicating use by the gp2gp service, by responding with a negative Application Acknowledgement with Response Code 07 "GP2GP Messaging is not enabled on this system" (see GP2GP Response Codes [Ref: 18]). Messages received during 'Disabled Mode' must not be

processed by the system after being rejected and must not be processed if the system is re-enabled. The system may provide viewing facilities to aid with diagnostics.

This mode must be the default mode for system installations. Part of the deployment process will reset the mode following local acceptance.

The following diagram illustrates 'Disabled Mode':



## **Appendix A. Transferred Documentation**

This section covers requirements in previous editions of this document that have been moved to separate documents and are referenced in the Related Documents section.

### **A.1. GP2GP Transfer Use Case**

Previous editions of this document included walkthroughs in the form of a Use Case. This has now been formalised as a separate document. See Use Case 1: Transfer electronic healthcare record [Ref: 2].

### **A.2. Role Based Access Control**

The GP2GP process requires an NHS Smartcard to be authenticated at the time of the patient registration, EHR Extract integration or rejection, and re-sending an EHR Extract manually with the appropriate business activity. See GP2GP R2.2 Requirements Specification [Ref: 1] for more details.

### **A.3. Accredited System and Message Handling System**

See GP2GP R2.2 Requirements Specification [Ref: 1]

### **A.4. Use of the Conversation ID**

This requirement is now covered in the Requirements Specification [Ref: 1].

### **A.5. Management Information**

Management Information requirements are formally documented under Use Case 2 [Ref: 3] and the Harvesting Management Information Supplementary Specification [Ref: 15]. Specific items to record (with values) are highlighted throughout this document but this must not be taken to mean these are the only values to record. The specific items to record should match the specification and any discrepancy should be highlighted to the Authority by suppliers.

## Appendix B. Recommended PDS Tracing Algorithm

The following diagram and requirements illustrate the recommended PDS Tracing Algorithm to be followed when registering a permanent patient when GP2GP is enabled.

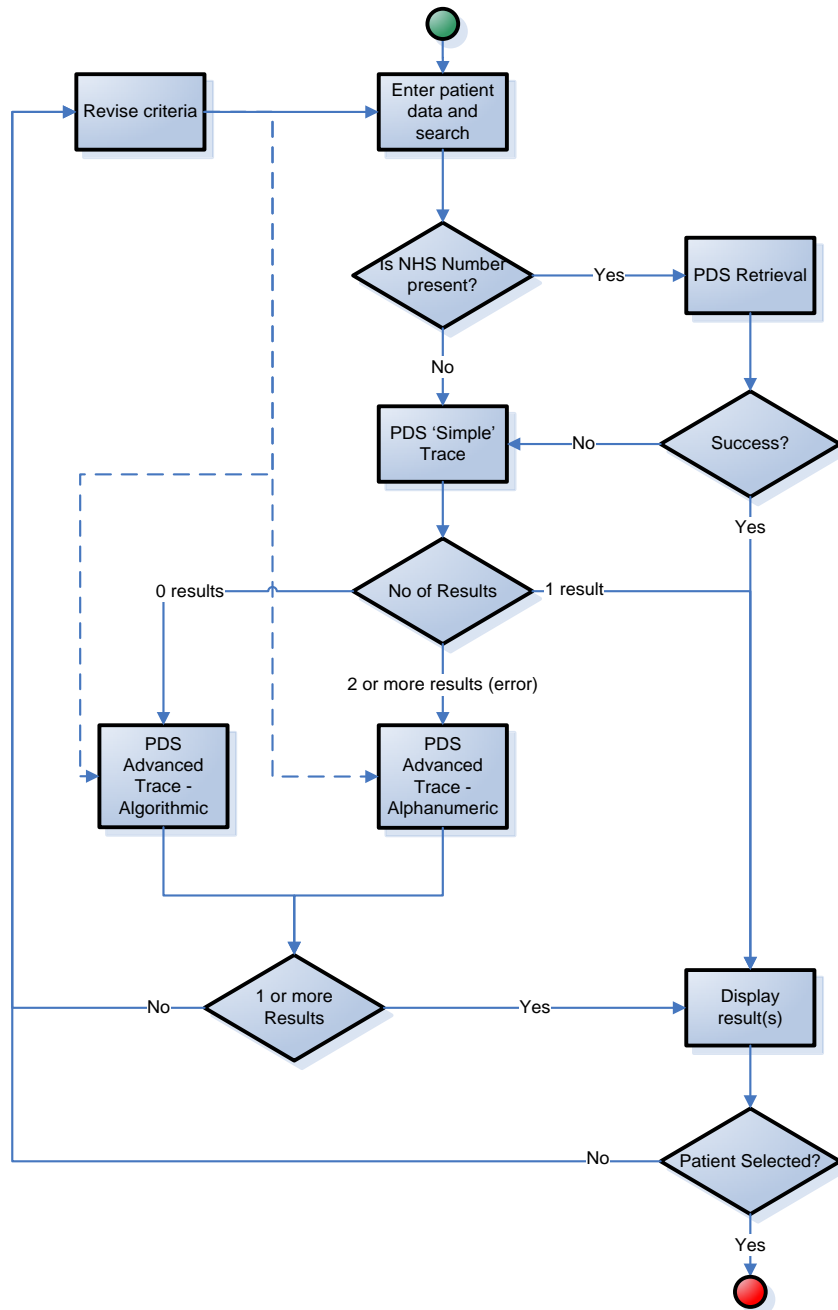


Figure 5 - Process Flow for the Recommended PDS Tracing Algorithm in GP2GP

Note: The system *may* support the alternative flow (dashed line in diagram) from 'Revise Criteria' to either of the PDS Advanced Trace steps. If so, the user *should* be given the option to determine which of the two searching modes are run.

Req ID	Requirement Text	Priority
TDB01	When GP2GP is enabled in the Requesting system, the algorithm used to trace a patient on PDS during the registration process <b>shall</b> , when required, support the use of a PDS Advanced Trace using Alphanumeric processing.	MUST
TDB02	When GP2GP is enabled in the Requesting system, the algorithm used to trace a patient on PDS during the registration process <b>should</b> , when required support the use of a PDS Advanced Trace with Algorithmic processing.	SHOULD
TDB03	<p>When GP2GP is enabled in the Requesting system, a permanent patient registration <b>should</b> use the following recommended algorithm with a user only involved at step 5, i.e. steps 1 to 4 <b>should</b> be performed automatically by the system with no user involvement:</p> <ol style="list-style-type: none"> <li>1) If NHS Number is present perform a PDS Retrieval (using the provided NHS Number)</li> <li>2) If the PDS Retrieval produces no results or the cross-check failed, create and send a PDS 'Simple' Trace (without the NHS number)</li> <li>3) If the PDS 'Simple' Trace produces zero results, create and send a PDS Advanced Trace with Algorithmic processing selected (without the NHS number).</li> <li>4) If the PDS 'Simple' Trace produces 2 or more results, create and send a PDS Advanced Trace with Alphanumeric processing selected (without the NHS number).</li> <li>5) If one or more results are returned, present the results to the user (subject to PDS audit controls – see PDS Compliance Specification) for selection of a patient whereupon full patient details (e.g. via a split screen) <b>shall</b> be presented and the user asked to confirm the record selected is correct (as per the PDS Compliance requirements). If no results are returned or the user decides that the patient is not amongst the results, prompt the user to revise the search criteria and repeat the tracing process (see note below).</li> </ol> <p>Note: The alternate flow allows the system to invoke another Advanced Trace following user revision of the search criteria. Systems <b>should</b> allow the user to determine which search mode is employed through suitable UI controls.</p>	SHOULD
TDB04	Where the supplier wishes to use another algorithm in the GP system, this <b>shall</b> be discussed and agreed with both the Authority's PDS and GP2GP teams at the design stage of a release.	MUST

Req ID	Requirement Text	Priority
TDB05	<p>The Requesting system <b>shall</b> require the user to supply as a minimum these fields:</p> <ul style="list-style-type: none"> <li>• Family Name/Surname</li> <li>• Date of Birth</li> <li>• Sex</li> </ul> <p>The Requesting system <b>shall</b> include these values in the PDS 'Simple'/Advanced Trace parameters.</p>	MUST
TDB06	<p>The Requesting system <b>shall</b> allow the user to supply additional fields:</p> <ul style="list-style-type: none"> <li>• Postcode</li> <li>• First Name/Forename</li> <li>• Any others normally included – the supplier <b>shall</b> consult the PDS compliance documentation or the version the system complies with.</li> </ul> <p>If supplied, the Requesting system <b>shall</b> include these values in the PDS 'Simple'/Advanced Trace parameters.</p>	MUST
TDB06	<p>The Requesting system <b>shall not</b> utilise the NHS Number in a PDS 'Simple' Trace or a PDS Advanced Trace for the permanent patient registration process if GP2GP is enabled.</p>	MUST
TDB07	<p>The Requesting system <b>shall</b> include these query parameter values in the PDS Tracing is performed:</p> <ul style="list-style-type: none"> <li>• historicDataIndicator = 1</li> <li>• SearchParameter = 1 or 2 (indicates whether alphanumeric or algorithmic searching is undertaken by PDS when an Advanced Trace is performed)</li> </ul>	MUST

Req ID	Requirement Text	Priority																					
TDB08	<p>The table below <b>shall</b> be followed to correctly map local record data items to message attributes:</p> <table border="1" data-bbox="276 454 1230 1200"> <thead> <tr> <th data-bbox="276 454 496 510">Data Field</th> <th data-bbox="496 454 965 510">Node path</th> <th data-bbox="965 454 1230 510">Value</th> </tr> </thead> <tbody> <tr> <td data-bbox="276 510 496 629">Patient's name(s)</td> <td data-bbox="496 510 965 629">/Query /person.name</td> <td data-bbox="965 510 1230 629">Entered Patient's name</td> </tr> <tr> <td data-bbox="276 629 496 748">Date of Birth</td> <td data-bbox="496 629 965 748">/Query /person.birthTime</td> <td data-bbox="965 629 1230 748">Entered Date of Birth</td> </tr> <tr> <td data-bbox="276 748 496 846">Sex / Gender</td> <td data-bbox="496 748 965 846">/Query /person.administrativeGenderCode</td> <td data-bbox="965 748 1230 846">1 or 2</td> </tr> <tr> <td data-bbox="276 846 496 902">Include History</td> <td data-bbox="496 846 965 902">/Query /historicDataIndicator</td> <td data-bbox="965 846 1230 902">1</td> </tr> <tr> <td data-bbox="276 902 496 1001">Advanced Search</td> <td data-bbox="496 902 965 1001">/Query /searchParameter</td> <td data-bbox="965 902 1230 1001">1 or 2</td> </tr> <tr> <td data-bbox="276 1001 496 1200">Postcode</td> <td data-bbox="496 1001 965 1200">/Query /personAddress / One of the supported Address formats with postcode – consult appropriate version of the MIM.</td> <td data-bbox="965 1001 1230 1200">Entered Patient's postcode</td> </tr> </tbody> </table>	Data Field	Node path	Value	Patient's name(s)	/Query /person.name	Entered Patient's name	Date of Birth	/Query /person.birthTime	Entered Date of Birth	Sex / Gender	/Query /person.administrativeGenderCode	1 or 2	Include History	/Query /historicDataIndicator	1	Advanced Search	/Query /searchParameter	1 or 2	Postcode	/Query /personAddress / One of the supported Address formats with postcode – consult appropriate version of the MIM.	Entered Patient's postcode	MUST
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TDB09	<p>The Requesting system <b>shall not</b> automatically select a patient from the Advanced Trace results, irrespective of the number of results, and <b>shall</b> require the user to pick a patient if they wish to continue the registration.</p> <p>The Requesting system <b>shall</b> allow the user to refine the search parameters and re-submit the Advanced Trace query irrespective of the number of results returned.</p>	MUST																					

Req ID	Requirement Text	Priority										
TBD10	<p>On selection of a patient and continuation of the registration by a user, the Requesting system <b>shall</b> retain the patient's demographics (for synchronisation purposes) NHS Number and previous Health Care Provider ODS code from the patient selected in the 'Simple'/Advanced Trace or PDS Retrieval results as identified below.</p> <table border="1" data-bbox="276 577 1230 1171"> <thead> <tr> <th data-bbox="276 577 456 633">Data Field</th> <th data-bbox="456 577 1230 633">Node path</th> </tr> </thead> <tbody> <tr> <td data-bbox="276 633 456 752">Patient's name(s)</td> <td data-bbox="456 633 1230 752">/PdsTraceMatch/subject /patientRole/patientPerson /name</td> </tr> <tr> <td data-bbox="276 752 456 851">Date of Birth</td> <td data-bbox="456 752 1230 851">/PdsTraceMatch /subject /patientRole/patientPerson /birthTime</td> </tr> <tr> <td data-bbox="276 851 456 949">NHS Number</td> <td data-bbox="456 851 1230 949">/PdsTraceMatch /subject /patientRole/id/@extension</td> </tr> <tr> <td data-bbox="276 949 456 1171">Current healthcare provider (GP practice)</td> <td data-bbox="456 949 1230 1171">/PdsTraceMatch/subject /patientRole/patientPerson /playedOtherProviderPatient /subjectOf/patientCareProvision /code[@code=1]/../responsibleParty /healthCareProvider/id/@extension</td> </tr> </tbody> </table>	Data Field	Node path	Patient's name(s)	/PdsTraceMatch/subject /patientRole/patientPerson /name	Date of Birth	/PdsTraceMatch /subject /patientRole/patientPerson /birthTime	NHS Number	/PdsTraceMatch /subject /patientRole/id/@extension	Current healthcare provider (GP practice)	/PdsTraceMatch/subject /patientRole/patientPerson /playedOtherProviderPatient /subjectOf/patientCareProvision /code[@code=1]/../responsibleParty /healthCareProvider/id/@extension	MUST
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Req ID	Requirement Text	Priority															
TBD11	<p>On selection of a patient and continuation of the registration by a user, the Requesting system <b>shall</b> send a PDS General Update request message to update the Healthcare Provider code of the patient to that of the Requesting system's GP Practice (together with any other details that need updating) as identified below.</p> <table border="1" data-bbox="276 577 1230 1776"> <thead> <tr> <th data-bbox="276 577 496 633">Data Field</th> <th data-bbox="496 577 967 633">Node path</th> <th data-bbox="967 577 1230 633">Value</th> </tr> </thead> <tbody> <tr> <td data-bbox="276 633 496 734">NHS Number</td> <td data-bbox="496 633 967 734">/ PdsUpdateRequest /subject /patientRole/id/@extension</td> <td data-bbox="967 633 1230 734">Patient's stored NHS Number</td> </tr> <tr> <td data-bbox="276 734 496 1081">Current healthcare provider (GP practice)</td> <td data-bbox="496 734 967 1081">/ PdsUpdateRequest /subject /patientRole /patientPerson /playedOtherProviderPatient /subjectOf /patientCareProvision /code[@code=1]/ ../responsibleParty /healthCareProvider /id/@extension</td> <td data-bbox="967 734 1230 1081">The ODS code of the Requesting system's GP practice</td> </tr> <tr> <td data-bbox="276 1081 496 1384">HealthCare provider type</td> <td data-bbox="496 1081 967 1384">/ PdsUpdateRequest /subject /patientRole /patientPerson /playedOtherProviderPatient /subjectOf /patientCareProvision /code[@code=1]/ ../responsibleParty /healthCareProvider /code/@code</td> <td data-bbox="967 1081 1230 1384">1</td> </tr> <tr> <td data-bbox="276 1384 496 1776">Registration date</td> <td data-bbox="496 1384 967 1776">/ PdsUpdateRequest /subject /patientRole /patientPerson /playedOtherProviderPatient /subjectOf /patientCareProvision /code[@code=1]/ ../responsibleParty /healthCareProvider /effectiveTime /low/@value</td> <td data-bbox="967 1384 1230 1776">Today's date in the format specified by the MIM</td> </tr> </tbody> </table>	Data Field	Node path	Value	NHS Number	/ PdsUpdateRequest /subject /patientRole/id/@extension	Patient's stored NHS Number	Current healthcare provider (GP practice)	/ PdsUpdateRequest /subject /patientRole /patientPerson /playedOtherProviderPatient /subjectOf /patientCareProvision /code[@code=1]/ ../responsibleParty /healthCareProvider /id/@extension	The ODS code of the Requesting system's GP practice	HealthCare provider type	/ PdsUpdateRequest /subject /patientRole /patientPerson /playedOtherProviderPatient /subjectOf /patientCareProvision /code[@code=1]/ ../responsibleParty /healthCareProvider /code/@code	1	Registration date	/ PdsUpdateRequest /subject /patientRole /patientPerson /playedOtherProviderPatient /subjectOf /patientCareProvision /code[@code=1]/ ../responsibleParty /healthCareProvider /effectiveTime /low/@value	Today's date in the format specified by the MIM	MUST
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