



Centers for Medicare & Medicaid Services  
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Implementation Guide  
For Health Information Handlers (HIHs)

# Electronic Submission of Medical Documentation System (esMD)



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## 1 INTRODUCTION

On September 15, 2011, CMS implemented the Electronic Submission of Medical documentation (esMD) system which enables providers to send medical documentation to Review Contractors electronically. The system is Exchange compatible, based on standards developed by the Office of the National Coordinator for Health IT.

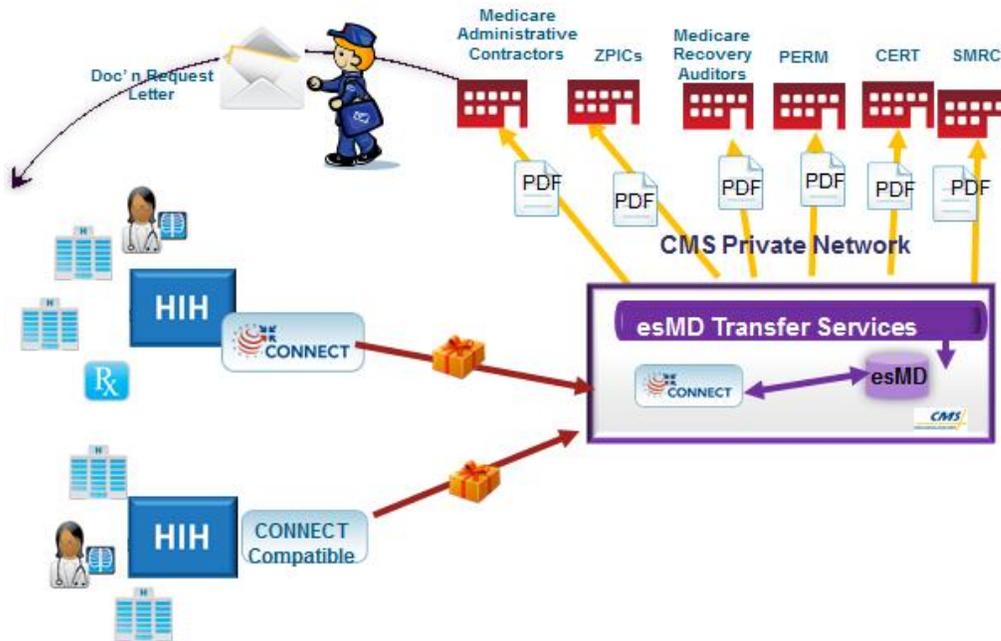
CMS uses several types of Review Contractors to measure, prevent, identify and correct improper payments or find potential fraud. These Review Contractors request medical documentation from the providers who submitted claims, and manually review the claims against the medical documentation to verify the providers' conformance with Medicare rules. To comply with the Review Contractor's requests for documentation, hospitals, physicians and other medical providers send medical documentation via mail, fax or esMD to the Review Contractor.

CMS Review Contractors are listed below:

- **CERT and PERM RCs measure improper payments.** The Comprehensive Error Rate Testing (CERT) contractor measures improper payments in the Medicare program. The Program Error Rate Measurement (PERM) contractor measures improper payments in the Medicaid program. CERT and PERM request thousands of medical records each year.
- **MACs prevent improper payments.** Medicare Administrative Contractors (MACs) conduct pre-payment and post-payment reviews of Medicare Fee-For-Service (FFS) claims. The Centers for Medicare & Medicaid Services (CMS) estimates that MACs will request several thousand medical records per year.
- **RACs identify and correct improper payments.** Medicare Recovery Audit Contractors (RACs) conduct post-payment review by comparing information from medical records to Medicare claims. CMS estimates that RACs will request over 1 million medical records from Providers each year.
- **ZPICs identify cases of suspected fraud.** The primary goal of the Zone Program Integrity Contractors (ZPICs) is to identify cases of suspected fraud, develop them thoroughly and in a timely manner, and take immediate action to ensure that Medicare Trust Fund monies are not inappropriately paid out and that any mistaken payments are recouped. There are seven ZPIC zones and the ZPICs for these zones are tasked with performing program integrity for Medicare Parts A, B, C, Durable Medical Equipment (DME), Home Health and Hospice (HH +H), and the Medicare-Medicaid data match program (Medi-Medi).
- **MICs conduct post-payment audits.** Audit Medicaid Integrity Contractors (Audit MICs) are entities with which CMS has contracted to conduct post-payment audits of Medicaid Providers. The overall goal of the Provider audits is to identify overpayments and ultimately decrease the payment of inappropriate Medicaid claims. At the direction of CMS, the Audit MICs audit Medicaid Providers throughout the country. The audits ensure that Medicaid payments are for covered services that were actually provided, properly billed, and documented. Audit MICs perform field audits and desk audits. The audits are conducted under Generally Accepted Government Auditing Standards.
- **SMRCs determine if claims were billed in compliance with Medicare coverage.** CMS has contracted with Strategic Health Solutions, LLC, a Supplemental Medical Review/Specialty Contractor (SMRC) to perform and/or provide support for a variety of tasks aimed at lowering the improper payment rates and increasing efficiencies of the medical review functions of the Medicare and Medicaid programs. The SMRC will evaluate medical records and related documents to determine whether Medicare claims were billed in compliance with coverage, coding, payment, and billing practices.

The current esMD Process is detailed in Figure 1 and further described below.

**Figure 1: Phase 1**



RCs notify Providers that they have been selected for review and request medical documentation by sending a documentation request letter. Prior to esMD, the Provider had three (3) choices when responding to these documentation requests: mail paper, mail a CD containing a Portable Document Format (PDF) or Tagged Image File Format (TIFF) file, or transmit a fax. The esMD system gave Providers an additional option for responding to these requests for medical documentation: electronic transmission through a CMS “gateway” to the RC that requested it.

In addition to accepting documentation request responses, esMD began allowing Providers to submit Prior Authorization Requests (PAR) to Durable Medical Equipment Medicare Administrative Contractors (DME MACs)(January, 2013).

esMD began allowing Providers to submit Appeals, RAC Discussion Requests, and ADMC Requests to review contractors with the Implementation of Release 3.0 (June 2014).

1. **The Provider decides what to submit.** In both the current paper process and the new esMD process, the RC does not specify which documents the Provider must send. It is up to the Provider to decide which documents to send. The documents that a Provider may submit include discharge summaries, progress notes, orders, radiology reports, lab results, etc.
2. **The initial phase of esMD will allow only unstructured documents.** The esMD system will only accept unstructured documents in PDF files in its initial phase of operation.
3. **One-Way Transmission: Provider to RC.** Phase 1 of esMD will be one directional electronic document submission (from Provider to RC).
4. **Each package must contain documentation about a single claim of a beneficiary.** Throughout this profile, the term “package” will be used to refer to one (1) or more documents associated with a single beneficiary. Each package can contain multiple documents as long as

all documents relate to the same claim of a beneficiary. The technical term for a package is a Simple Object Access Protocol (SOAP) message.

5. **More details about esMD data exchange can be found in the esMD Profile.** See <http://www.connectopensource.org>.
6. **CMS is not involved in the business relationship between the Health Information Handler (HIH) and the Provider.** This document does not describe how HIHs should collect or store medical documentation from the Providers. The HIH and Provider must comply with all applicable Health Information Portability and Accountability Act (HIPAA) provisions.

## 1.1 Intended Audience

The primary audience for this document includes HIHs such as Regional Health Information Organizations (RHIOs), Health Information Exchanges (HIEs), Release of Information (ROI) vendors, claim clearinghouses, and other organizations that securely submit medical documentation on behalf of Providers via CONNECT compatible gateways to review contractors.

This document refers to RHIOs, HIEs, ROI vendors, claim clearinghouses, and other entities that move health information over secure CONNECT compatible gateways on behalf of health care Providers as HIHs.

HIHs who have built a CONNECT compatible gateway and wish to participate esMD, should contact the esMD Coordinators at [esMDCoordinators@gssinc.com](mailto:esMDCoordinators@gssinc.com). For more information about CONNECT gateways, see [www.connectopensource.org](http://www.connectopensource.org). For a list of HIHs that currently participate in the esMD Program, see [www.cms.gov/esMD](http://www.cms.gov/esMD).

The secondary audience for this document includes:

- Software developers who aim to assist RCs in viewing and more efficiently processing documents received in the esMD format. Software developers that develop products to assist HIHs in receiving data easily from a Provider's Electronic Health Record (EHR) in the esMD format.

### Related Documents

- Approved CMS esMD External Data Representation (XDR) Profile Definition Version 1.0 (see <http://standards-and-interoperability-specifications.wikispaces.com/CMS+esMD>)
- Integrating the Healthcare Enterprise (IHE) Deferred Cross-Enterprise Document Reliable Messaging (XDR) (see v1.1.0.6 <http://developer.connectopensource.org>.)
- Trial Implementations Document Submission Interface Specification Version 1.1.0 (See <http://developer.connectopensource.org>. Document\_Submission\_Service\_Interface\_Specification\_v1\_1\_0\_FINAL.docx)
- Trial Implementations Message Platform Service Interface Specification Version 1.9.8 (see [http://healthit.hhs.gov/portal/server.pt/gateway/PTARGS\\_0\\_10741\\_909196\\_0\\_0\\_18/MessagingPlatformSpecification.pdf](http://healthit.hhs.gov/portal/server.pt/gateway/PTARGS_0_10741_909196_0_0_18/MessagingPlatformSpecification.pdf))
- Authorization Framework Specification Version 2.0 (See - [http://healthit.hhs.gov/portal/server.pt/gateway/PTARGS\\_0\\_11673\\_910545\\_0\\_0\\_18/NHIN\\_AuthorizationFrameworkProductionSpecification\\_v2.0.pdf](http://healthit.hhs.gov/portal/server.pt/gateway/PTARGS_0_11673_910545_0_0_18/NHIN_AuthorizationFrameworkProductionSpecification_v2.0.pdf))
- IHE TF3 Cross-Transaction Specifications and Content Specifications Version 6.0 (See - [http://www.ihe.net/Technical\\_Framework/upload/IHE\\_ITI\\_FT\\_6-0\\_Vol3\\_FT\\_2009-08-10-2.pdf](http://www.ihe.net/Technical_Framework/upload/IHE_ITI_FT_6-0_Vol3_FT_2009-08-10-2.pdf))

## 1.2 Business Needs Supported

This esMD Implementation Guide defines how esMD program data may be submitted by healthcare Providers to RCs under contract with the CMS. The esMD Implementation Guide also describes how the status of these submissions will be conveyed to Providers (e.g., transmission receipt, detailed validation status with errors or success, and delivery confirmation messages).

Phase 1 (Release 1.1-1.4) of the esMD system will support the submission of documentation by healthcare Providers to a limited number of RCs. To see a list of participating RCs, see Section 4.3.9 below and [www.cms.gov/esMD](http://www.cms.gov/esMD).

The purpose of the esMD Implementation Guide is to supplement the esMD Profile and assist Providers and their HIHs in submitting esMD transactions to RCs. The esMD profile can be found at <http://www.connectopenseource.org>.

The esMD system will accept medical documentation only in the format described in Table 1 below.

**Table 1: esMD Profile Specifications**

Name of Specification	Purpose	Structured or Unstructured	Release or Time Period
esMD XDR	For submitting documentation in PDF format using HITSP's XDR standard	Unstructured	September 2011

## 2 ON-BOARDING PROCESS

The eHealth Exchange (formerly known as NHIN/NwHIN) is a set of standards, protocols, legal agreements, and specifications that a consortium of health information organizations have agreed are necessary for secure and private exchange of health information over the Internet. eHealth Exchange is overseen by the Office of the National Coordinator (ONC) for Health Information Technology (IT).

The CMS esMD Gateway will accept transmissions only from organizations that have successfully completed the CMS esMD On-boarding Process.

### 2.1 CMS esMD On-Boarding Process for HIHs

Regardless of an HIH's eHealth Exchange status, any HIH that wants to submit via the esMD system must follow the steps below:

- A. The HIH submits an Introductory Details form to [esMDCoordinators@qssinc.com](mailto:esMDCoordinators@qssinc.com). This form should include the following information:
  - i. Company name;
  - ii. Contact person e-mail and phone number;
  - iii. Company logo, company Uniform Resource Locator (URL), and permission to use the logo and URL in esMD related brochures, websites, and presentations; and
  - iv. Indication of where the HIH intends to offer esMD services (i.e., nationwide or regional).
- B. The HIH submits an HIH Environmental Details form. **Note:** Any changes to this form after submission to the CMS/QSSI esMD Team could possibly cause a delay in testing and may result in the HIH being moved to the next quarterly onboarding group. This form includes the following information:
  - i. HL7 registered Organizational Identifier (OID)
    - The HIH acquires an OID from Health Level 7 (HL7), [www.hl7.org](http://www.hl7.org), and submits the OID to Quality Software Services, Inc. (QSSI) via the HIH Environment Details form. The HIH can get the OID registered from HL7: <http://www.hl7.org/oid/index.cfm>. Click the link in the top right corner: **Obtain or**

**Register an OID.** Please, see the esMD SharePoint (“How To” Guides folder) for detailed instructions.

All HL7 OIDs will have a prefix **“2.16.840.1.113883.” [joint-iso-itu-t(2) country(16) us(840) organization(1) hl7(113883).1]** and are followed by an OID Type (e.g., 2.16.840.1.113883.3.xxx.x).

The HII will pick the OID Type based on their organization type and purpose of use. Most of the HIIs registered their OIDs with OID Type = **3 - Root to be a Registration Authority** (External groups that have been issued an HL7 OID root for their own use).

- HII OIDs submitted for the Validation (VAL) environment will have a .2 added as a suffix.
- HIIs OIDs submitted for the Production (PROD) environment will have a .1 added as a suffix.

**Note:** To avoid confusion, HIIs will submit their HL7 registered OID via the HII Environment Details Form without the presence of the .1/.2 suffix. HIIs will add the .1/.2 suffix on their esMD Gateway configuration, and the HII Coordinator will add the .1/.2 suffix for configuration at CMS.

ii. Public-facing Internet Protocol address

- The HII submits their HII Gateway IP address to QSSI.
- A public-facing IP address is the address that identifies the HII network and allows the CMS esMD Gateway to connect to the HII network from the Internet. The HII will hide their internal private esMD Gateway (or server) IP address by NATing it to the public-facing IP address. The HII technical team will contact their network team to procure or assign a public-facing IP address to their internal private IP (Example: Public-facing IP address can be purchased from the AT&T, Verizon, etc.). If an HII is using multiple esMD servers, then the HII will only submit either ‘one IP address for both inbound and outbound’ or ‘one IP address for inbound and one IP address for outbound’. In this case, the CMS esMD Team suggests the HII use load balancing and NATing to convert/submit the request from multiple servers to one IP address. The HII can submit either one IP address for both inbound and outbound traffic (or) two IP addresses for inbound and outbound traffic through the HII Environmental Details form.

iii. Response URL and port number

iv. Transport Layer Security (TLS) Certificate

- The HII obtains a server certificate from a certificate authority (CA).
- Secure Socket Layer (SSL) certificates successfully tested with the CMS esMD Gateway are as follows:
  - **Entrust**
    - **Suggested Type: Entrust Advantage SSL Certificate**
    - **URL :** <http://www.entrust.net/ssl-certificates/advantage.htm>
    - \$239/yr. as of 12/01/2011
  - **Thawte**
    - **Suggested Type: SSL Web Server Certificates**
    - **URL :** <http://www.thawte.com/ssl/index.html>
    - **\$249/yr. as of 12/01/2011**

All CAs used to generate certificates for use in the esMD project must adhere to the following guidelines:

1. Level 2 Identity Proofing as described in section 7 of this National Institute of Standards and Technology (NIST) publication:  
[http://csrc.nist.gov/publications/nistpubs/800-63/SP800-63V1\\_0\\_2.pdf](http://csrc.nist.gov/publications/nistpubs/800-63/SP800-63V1_0_2.pdf).  
(Specifically, see Table 1 on pages 22 through 24.)
  2. 2048 bit RSA keys
  3. Advance Encryption Standard (AES) 128 bit encryption
  4. Secure Hash Algorithm-1 (SHA-1) certificate signing algorithm
  5. Server Level and server-to-server communication certificate. (Note: No wild card (\*.\*) or domain level certificate are accepted).
  6. All cryptographic modules used by HIH eHealth Exchange instances (typically CONNECT) must adhere to Federal Information Processing Standards (FIPS) 140-2 Compliance criteria and utilize TLS.
- CMS security policies require HIHs to procure certificate renewals on a yearly basis. HIHs should only procure a certificate that expires after one (1) year. **Note:** In the future, the CMS security team may accept multi-year validation CA Certificates.
  - HIHs should note the expiration date of their certificates and plan accordingly to renew and submit certificate renewals to their HIH coordinator three (3) weeks in advance of the expiration date.

For reference:

- [http://www.cms.gov/informationsecurity/downloads/ARS\\_App\\_B\\_CMSR\\_Moderate.pdf](http://www.cms.gov/informationsecurity/downloads/ARS_App_B_CMSR_Moderate.pdf) (See section Appendix B, SC13-1)
- <http://csrc.nist.gov/publications/fips/fips140-2/fips1402.pdf>

v. Endpoint URL

- C. The HIH turns on the FIPS 140-2 (For cryptographic modules)

The FIPS 140-2 is a government standard that provides a benchmark for how to implement cryptographic software (<http://technet.microsoft.com/en-us/library/cc180745.aspx>). For the CONNECT Solution, this standard is being met to ensure that the CONNECT Gateway is FIPS 140-2 compliant.

**Any HIH that needs to communicate with the esMD Gateway needs to have the FIPS mode enabled.**

- D. Upon successful CMS On-boarding, the HIH will receive an e-mail notification from their HIH coordinator that they have completed the onboarding process. The HIH will then be involved in integration and interoperability testing. This testing will be first done by sending the claim documentation through the CMS esMD Gateway in the validation region and later in the production region.

## 2.2 CMS On-Boarding Process with existing eHealth Exchange On-Boarded HIHs

This will be addressed in later releases.

## 2.3 eHealth Exchange On-Boarding Process

This will be addressed in future releases of esMD.

## 2.4 Annual Review of HIH Accounts

Eleven (11) months after QSSI receives a certificate from an HIH, QSSI will send the HIH a certification status email. This notification will include a 30-day certificate expiration date and request for HIHs to submit a certificate renewal within two (2) weeks of this initial notification. Failure to comply with this request will result in being locked out of the esMD system.

If the two-week period expires prior to QSSI receiving a certificate renewal from the HIH, daily e-e-mail reminders will be sent warning HIHs of possible suspension of esMD access. Following 14 days from the two-week warning notice, QSSI will manually remove the HIH's OID from the chart of acceptable HIHs.

## 2.5 HIH OFF-BOARDING PROCESS

### 2.5.1 HIHs who have not yet fully onboarded

HIHs, who suspend participation before they fully complete the onboarding process, will receive an esMD Exit Letter from QSSI staff. Their SharePoint (SP) access will be active for 90 days.

### 2.5.2 HIHs who have fully onboarded

If an HIH informs QSSI they no longer want to participate in esMD, QSSI will ask them to specify an effective date. Following the specified date, QSSI will remove the HIH's OID from the approved chart of acceptable HIHs.

## 3 INTEGRATION AND esMD INTEROPERABILITY TESTING

Before submitting the claim documentation in esMD production, all onboarding HIHs will complete the integration and esMD interoperability testing by sending the claim documentation through the CMS esMD Gateway in the VAL region. Upon successful completion of the testing in the VAL region, HIHs will get an approval e-mail from their HIH coordinator to operate in the esMD PROD region.

### 3.1 CMS Validation Region Testing with HIH

Prior to testing in the VAL region, all HIHs will receive the esMD Validation Configuration document.

This testing is performed through the esMD VAL CONNECT Gateway. Details are provided in Appendix C.

- A. The HIH provides its testing gateway OID to QSSI.
- B. The CMS esMD CONNECT Gateway configuration will hard code the HIH provided testing OID.
- C. The HIH will configure its gateway with the CMS esMD CONNECT Gateway VAL region OID 2.16.840.1.113883.13.34.110.2.

The HIH acquires a TLS server certificate from a CA, which conforms to the esMD security standards for the onboarding process. **Note:** Currently, CMS mutual authentication security hardware has successfully tested only with Entrust and Thawte CA Certificates. CMS is currently working with various vendors in fixing the issue related to other CA Certificates. It is up to the HIH to take the risk in procuring the certificate from a well-established and perfectly tested CA Certificate. CMS does not enforce the procurement of any particular CA Certificate and only suggests based on testing results.

- D. The esMD Team and the HIH perform the connectivity test.
- E. The esMD Team will coordinate the manual interoperability and end-to-end integration testing between the esMD CONNECT Gateway system and the HIH by opening a conference call with the related stakeholders and sharing the results. A manual test will be

performed, due to the lack of automated XDR Testing tools. For ASC X12 transmissions, exploration of possible X12 testing tools is necessary.

- F. Upon successful completion of the interoperability and integration testing (i.e., transmission of 100% correctly formed payload and receipt of the two asynchronous responses back from the esMD Gateway) between the HIH and the validation region esMD Gateway, the HIH will officially receive an email notification from their HIH coordinator. The HIHs can then start production connectivity and integration testing with the CMS production esMD CONNECT Gateway.

In the event an HIH misses the testing preparation timeline of four (4) weeks (i.e., sending statistics, attaining OIDs, building and configuring their gateway, and exchanging TLS certificates) **OR** actual integration test time lines of two (2) weeks, QSSI will work with the HIH to induct them in the next quarterly Integration session. Taking into consideration the esMD release timelines, QSSI plans to hold quarterly sessions to induct new HIHs. Information on the commencement of new integration testing sessions will be published and placed on the esMD SP site.

### 3.2 CMS Production Region Testing with HIH

Prior to testing in the PROD region, all HIHs will receive the esMD Production Configuration document.

This testing is performed through the esMD production CONNECT Gateway.

- A. The HIH provides their PROD OID to QSSI. It is not necessary for the HIH to acquire a new OID for PROD. HIHs will add a .1 as a suffix to their existing OID to indicate the PROD environment.
- B. The CMS esMD CONNECT Gateway configuration will hard code the HIH provided production OID.
- C. The HIH will configure its gateway with the CMS esMD CONNECT Gateway PROD region OID 2.16.840.1.113883.13.34.110.1.
- D. The HIH acquires a TLS certificate from a CA that conforms to the esMD security standards for the onboarding process. Note: Currently, CMS CISCO mutual authentication hardware has success only with Entrust and Thawte CA Certificates. CMS is currently working with the CISCO team in fixing the CISCO hardware to accept other CA Certificates.
- E. The esMD Team and the HIH perform the connectivity test.
- F. The esMD Team will coordinate the manual interoperability and end-to-end integration testing between the esMD CONNECT Gateway system and the HIH by opening a conference call with the related stakeholders and sharing the results. A manual test will be performed, due to the lack of automated XDR Testing tools. For ASC X12 transmissions, exploration of possible X12 testing tools is necessary.
- G. Upon successful connectivity and integration testing (i.e., transmission of 100% correctly formed payload and receipt of the two asynchronous responses back from the esMD gateway) between the HIH and the CMS production esMD Gateway, the HIH will officially receive communication from their HIH coordinator that the HIH has passed the production testing and can officially transmit the claim documents through the CMS production esMD CONNECT Gateway.

## 4 PROFILES

### 4.1 esMD XDR Profile

This esMD Implementation Guide provides more information about the transmissions sent using the esMD XDR at the following link: <http://standards-and-interoperability-specifications.wikispaces.com/CMS+esMD>.

## 5 INTERFACE DEFINITION

### 5.1 Interface Descriptive Name

The HIH adopts the IHE XDR profile in a SOAP envelope with ITI – 41 Provide and Register Document set – b transaction metadata and C62 document payload attachment. Each SOAP message can contain multiple document attachments related to the same claim of a patient. The initial esMD Phase 1 Release 1 (R1.1) allows HIHs to submit messages up to 19MB in size. The esMD Gateway allows HIHs to submit multiple SOAP messages with different Unique IDs for a Claim Document Request of a patient.

### 5.2 Interface Level

From the HIH to the CMS esMD CONNECT Gateway

### 5.3 Definition

#### 5.3.1 Interaction Behavior

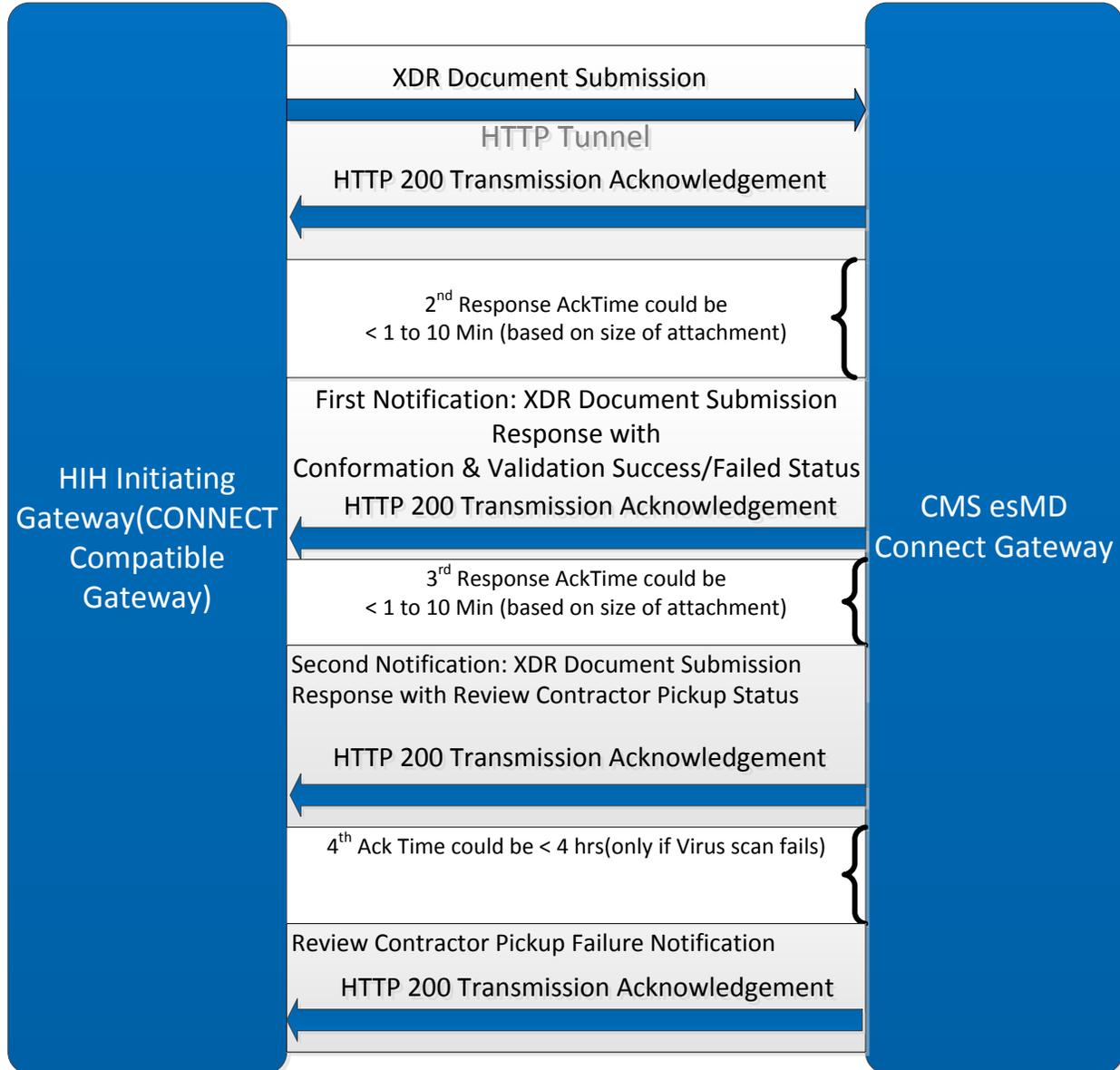
The following diagram illustrates the communication between the HIH and the CMS esMD CONNECT Gateway with asynchronous messaging with three HTTPS requests.

The HIH Gateway submits the electronic medical claim documentation based on the CMS onboarded HIH and their gateway OID. The HIH submits the IHE XDR profile SOAP Messages to CMS with the ITI – 41 (Provide and Register Document Set – b) transaction, SAML Assertions, Document Submission Meta Data, and C62 Payload in the SOAP body.

The CMS esMD CONNECT Gateway receives the request, with SAML Assertions, and consults its gateway Policy Enforcement Point (which could be a SAML authority) which, in turn, uses the esMD database to establish whether the submitted Home Community ID will be allowed to perform the esMD document submission function.

Assertions can convey information about the authentication and authorization acts that the HIH performed by subjects (the OID acts as a User ID), its attributes, and authorization decisions (to check whether the subject/OID is allowed to submit the claim supporting documents).

**Figure 2: Asynchronous Acknowledgments with Multiple Hyper Text Transfer Protocol (HTTP) Connections**



### 5.3.2 Triggers

All requests issued by the HIH must implement the Messaging Platform Service Interface Specification and the Authorization Framework Service Interface Specification.

### 5.3.3 Transaction Standard

The authorization framework is based on the implementation of the OASIS WS-I Security Profile SAML Token Profile as specified in the Messaging Platform Service Interface Specification. SAML 2.0 is the base specification for expressing assertions in the eHealth Exchange.

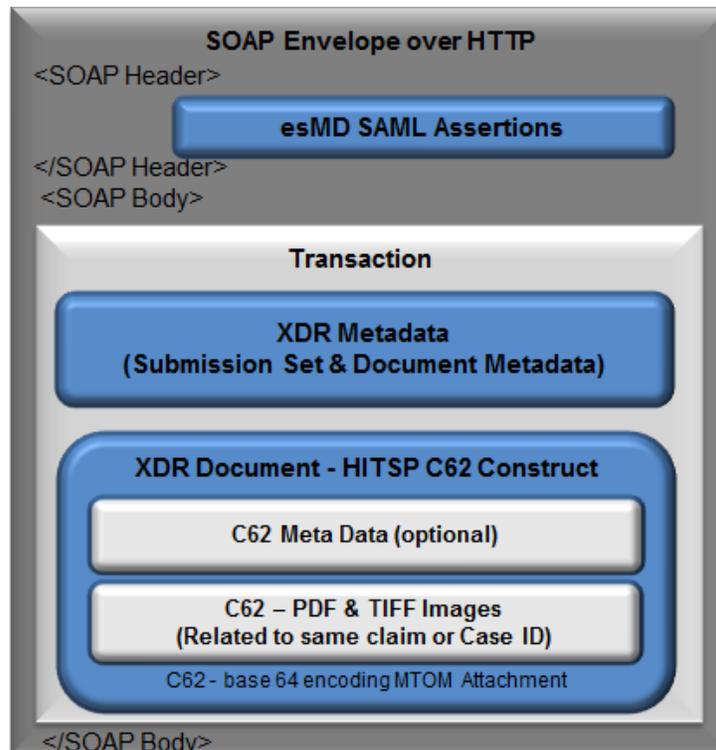
### 5.3.4 Technical Pre-Conditions

- HIHs must conform to the interoperability standards:
  - CMS esMD Profile
  - IHE XDR
  - WS-I Basic Profile
  - WS-I Basic Security Profile
- HIHs must conform to the Claim Medical Document to the Health Information Technology Standards Panel (HITSP) C62 Interoperability Specification.
- HIHs must conform to messaging platform and authorization framework for communication.
  - Messages: SOAP v2.0 with Message Transmission Optimization Mechanism (MTOM) attachments
  - Service Descriptions: WSDL
  - Addressing/Routing: WS-Addressing
  - Security: WS-Security, XML DSIG
  - Authorization: SAML Assertion
  - Authentication: X509 certificate, 2-way TLS with FIPS 140-2 enable mode, 128-bit encryption.
  - Base 64 encoding of the C62 payload
- The esMD Document Submission data is transmitted in the SOAP message with IHE XDR transactions.
- There will be mutual authentication between the HIH Gateway and the CMS CONNECT Gateway using a Non-ONC TLS certificate..
- The CMS CONNECT Gateway will authorize the requests based on the SAML Assertions with its Home Community ID and Organization IDs.
- The HIH will create digitally signed SAML Assertions.
- A globally unique identifier, assigned by HIH internal system and primarily intended for use as a unique identifier for each submission that can be used to correlate the request and responses of a particular submission, is generated. Note: The Gateway created message ID is different from this unique ID.
- The HIH will encode the attached C62 document in base 64 encoding and add its hash key to the XDR metadata.
- The HIHs have established CMS data use agreements to share claim supporting documentation data to CMS.
- Architectures of the HIHs are decoupled from, and are opaque to, the CMS esMD and other HIHs. The HIHs need not use the same CMS esMD security mechanisms or standards internally.
- We suggest the initiating HIH authenticate and authorize the gateway system by sending the document submission request to the esMD project, and it is required that they do so internally. The esMD is not responsible for this action.

### 5.3.5 SOAP Message Envelope

The following figure illustrates the SOAP envelope with XDR interchange and HITSP C62 construct.

**Figure 3: SOAP Envelope with XDR Interchange/HITSP C62 Construct**



```

<soapenv:Envelope
  xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:urn="urn:gov:hhs:fha:nhinc:common:nhinccommonentity"
  xmlns:urn1="urn:gov:hhs:fha:nhinc:common:nhinccommon"
  xmlns:add="http://schemas.xmlsoap.org/ws/2004/08/addressing"
  xmlns:urn2="urn:oasis:names:tc:ebxml-regrep:xsd:lcm:3.0"
  xmlns:urn3="urn:oasis:names:tc:ebxml-regrep:xsd:rs:3.0"
  xmlns:urn4="urn:oasis:names:tc:ebxml-regrep:xsd:rjm:3.0"
  xmlns:urn5="urn:ihe:iti:xds-b:2007">
  <soapenv:Header/>
  <soapenv:Body>
    <urn:RespondingGateway_ProvideAndRegisterDocumentSetRequest>
      <urn:assertion>
        <urn:nhinTargetCommunities>
          <urn:ProvideAndRegisterDocumentSetRequest>
        </urn:ProvideAndRegisterDocumentSetRequest>
      </urn:RespondingGateway_ProvideAndRegisterDocumentSetRequest>
    </soapenv:Body>
  </soapenv:Envelope>

```

The MTOM-related tags are abstracted in above soap envelope.

Table 2: Name Spaces Details with CONNECT Software lists the name space details associated with the CONNECT Software.

**Table 2: Name Spaces Details with CONNECT Software**

S.No	Name Space	Name Space URL
1.	soapenv	http://schemas.xmlsoap.org/soap/envelope/
2.	urn	urn:gov:hhs:fha:nhinc:common:nhinccommonentity"
3.	urn1	urn:gov:hhs:fha:nhinc:common:nhinccommon
4.	add	urn:http://schemas.xmlsoap.org/ws/2004/08/addressing
5.	urn2	urn:oasis:names:tc:ebxml-regrep:xsd:lcm:3.0
6.	urn3	urn:oasis:names:tc:ebxml-regrep:xsd:rs:3.0
7.	urn4	urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0
8.	urn5	urn:ihe:iti:xds-b:2007

### 5.3.6 SAML Assertions

The SAML Assertions define the exchange of metadata used to characterize the initiator of an HIH request so that it may be evaluated by the CMS esMD CONNECT Gateway in local authorization decisions. The purpose of this SAML Assertion exchange is to provide the CMS esMD CONNECT Gateway with the information needed to make an authorization decision using the policy enforcement point for the requested esMD function. Each initiating SOAP message must convey information regarding the HIH attributes and authentication using SAML 2.0 Assertions.

### 5.3.7 Assertions Design Principals and Assumptions:

The esMD CONNECT Gateway uses the information conveyed via the Assertions (Authorization Framework) to inform its local authorization policy decision.

The initiating HIH must include all REQUIRED attributes in each request message. It is at the discretion of the receiving esMD CONNECT Gateway to decide which attributes to consider in its local authorization decision against its policy decision controller.

The initiating HIH is responsible for the authentication and authorization of its users and system requests.

### 5.3.8 Assertions Transaction Standard

- Authorization Framework v 2.0
- OASIS SAML V2.0,
- Authentication Context for SAML V2.0,
- Cross-Enterprise Security and Privacy Authorization (XSPA) Profile of SAML for Healthcare Version 1.0 OASIS Web Services Security: SAML Token Profile 1.1 specifications.

### 5.3.9 Specific Assertions

The following set of SAML Assertions are designated as required (R) for all communications between the HIH and the CMS esMD CONNECT Gateway.

**Table 3: Standard SAML Assertions in SOAP Envelope**

SAML Assertions in SOAP Envelope		
Element / Attribute	esMD Required	Who Create? - Gateway or Manual
SAML ASSERTION	R	
Version	R	CONNECT Gateway
ID	R	CONNECT Gateway
IssueInstant	R	CONNECT Gateway
Issuer	R	CONNECT Gateway
Subject	R	CONNECT Gateway
Authn Statement	R	
AuthnContext	R	HIH Application will add under assertion
SubjectLocality	R	HIH Application will add under assertion
AuthnInstant	R	HIH Application will add under assertion
SessionIndex	O	HIH Application will add under assertion
Attribute Statement	R	
subject-ID	R	CONNECT Gateway
organization	R	HIH Application will add under assertion
homeCommunityID	R	HIH Application will add under assertion
purposeofuse	R	HIH Application will add under assertion
NPI	R	HIH Application will add under assertion – ‘userInfo.userName’
Intended Recipient	R	HIH Application will add under assertion - ‘uniquePatientId’
Authorization Decision Statement	O	
Action	R	HIH Application will add under assertion
Decision	R	HIH Application will add under assertion
Resource	R	HIH Application will add under assertion
Evidence	R	HIH Application will add under assertion

**5.3.10 esMD SAML Assertion Details**

The following table provides the esMD SAML Assertion details.

**Table 4: esMD SAML Assertion Details**

S. No.	SAML Assertion Attribute	Definition and Example	R/ R2/ O	Source / CONNECT Software Allowed	References to esMD Domain Specific Values
1.	homeCommunityId	<p><i>&lt;urn1:homeCommunityId &gt; &lt;urn1:description&gt;Description of the submitting HIH CONNECT or CONNECT Compatible Gateway&lt;/urn1:description&gt;</i></p> <p><i>&lt;urn1:homeCommunityId&gt;urn:oid:1.3.6.1.4.1.101420.6.1&lt;/urn1:homeCommunityId&gt;</i></p> <p><i>&lt;urn1:name&gt;Name of the submitting HIH CONNECT or</i></p>	R	esMD Requirement / Yes	HIH OID

S. No.	SAML Assertion Attribute	Definition and Example	R/ R2/ O	Source / CONNECT Software Allowed	References to esMD Domain Specific Values
		<p><i>CONNECT Compatible Gateway</i>&lt;/urn1:name&gt; &lt;/urn1:homeCommunityId&gt;</p>			
2.	organizationId	<p>&lt;urn1:organizationId &gt;            &lt;urn1:description&gt;Description of Broker Organization between Provider and the submitting HIH CONNECT or CONNECT Compatible Gateway&lt;/urn1:description&gt;</p> <p>&lt;urn1:homeCommunityId&gt;urn:oid:1.3.6.1.4.1.101420.6.1&lt;/urn1:homeCommunityId&gt;            &lt;urn1:name&gt;Name of Broker Organization between Provider and the submitting HIH CONNECT or CONNECT Compatible Gateway&lt;/urn1:name&gt;            &lt;/urn1:organizationId&gt;</p>		esMD Requirement / Yes	HIH OID or any broker organization (it's OID) between Providers and HIH
3.	intendedRecipient	<p><u>Note:</u> Temporarily, add the Intended Recipient value in the unique Patient ID as OID.</p> <p>&lt;urn1:uniquePatientId&gt;urn:oid:2.16.840.1.113883.13.34.110.1.110.9&lt;/urn1:uniquePatientId&gt;</p> <p>In the next spec factory changes, the intended recipient values will be change to HL7 XON.</p> <p>The intendedRecipient field in the XDS Metadata will use the HL7 XON data type for this profile.</p> <p>This data type contains 10 subfields separated by a ^ sign, of which three are required:</p> <p>XON.1 is the name of the organization that is the intended recipient This will be the name of the RAC that is intended to receive the submission.</p> <p>XON.6 identifies the assigning authority for the identifiers appearing in XON.10. This field will be completed using the following string: &amp;CMS OID FOR RACS&amp;ISO [ed. Note: Replace CMD OID FOR RACS with a CMS assigned OID].</p> <p>XON.10 is the CMS Identifier for the</p>	R	esMD Requirement / NO*	See Table 4

S. No.	SAML Assertion Attribute	Definition and Example	R/ R2/ O	Source / CONNECT Software Allowed	References to esMD Domain Specific Values
		<p>RAC. An example appears below (bold text should be replaced with the appropriate values): [Ed. Note: Replace CMD OID FOR RACS with a CMS assigned OID].  <b>RAC ORGANIZATION NAME^^^^^&amp;CMS OID FOR RACS&amp;ISO^^^^^CMS ASSIGNED IDENTIFIER</b><i>&lt;urn1:intendedReceipt &gt;</i>  <i>&lt;urn1:description&gt;Description of receiving Review Contractor&lt;/urn1:description&gt;</i></p> <p><i>&lt;urn1:organizationId&gt;DCS^^^^^&amp;2.16.840.1.113883.13.34.110.1.100.1&amp;ISO^^^^^2.16.840.1.113883.13.34.110.1&lt;/urn1:organizationId&gt;</i>  <i>&lt;urn1:name&gt;Name of Review Contractor, to whom Claim Medical Documentation shall be submitted.&lt;/urn1:name&gt;</i>  <i>&lt;/urn1:intendedReceipt&gt;</i></p>			
4.	NPI	<p>In the future – NPI will be added to connect assertions. Until then esMD will use the ‘username’ attribute field for ‘NPI’ value.</p> <p><i>&lt;urn1:userInfo&gt;</i>  <i>&lt;urn1:userName&gt;6101234512&lt;/urn1:userName&gt;</i>  <i>&lt;urn1:org&gt;</i>  <i>&lt;urn1:description&gt;Description of Provider NPI &lt;/urn1:description&gt;</i></p> <p><i>&lt;urn1:homeCommunityId&gt;Any Broker organization in between Provider and HIH or HIH OID&lt;/urn1:homeCommunityId&gt;</i>  <i>&lt;urn1:name&gt;Name of Provider from whom Claim Medical Documentation are submitted&lt;/urn1:name&gt;</i>  <i>&lt;/urn1:org&gt;</i>  <i>&lt;/urn1:userInfo&gt;</i></p> <p><u>Please Note:</u> The National Provider Identifier (NPI) value needs to be 10</p>	R	esMD Requirement / <b>NO*</b>	

S. No.	SAML Assertion Attribute	Definition and Example	R/ R2/ O	Source / CONNECT Software Allowed	References to esMD Domain Specific Values
		<p>numeric characters long to comply with the standard specification. If the NPI value sent by the HIH does not conform to this format, the submission request shall be rejected and an error message will be sent to the submitting HIH gateway. Please refer to Table 19 for the error code and related message text.</p>			
5.	purposeOfDisclosureCode	<p>HIH will enter appropriate values. This is used by the CONNECT Gateway for SOAP header SAML processing.</p> <pre> &lt;urn1:purposeOfDisclosureCoded&gt;   &lt;urn1:code&gt;PAYMENT&lt;/urn1:code&gt;   &lt;urn1:codeSystem&gt;2.16.840.1.113883.3.18.7.1&lt;/urn1:codeSystem&gt;   &lt;urn1:codeSystemName&gt;esMD CMS Purpose&lt;/urn1:codeSystemName&gt;   &lt;urn1:codeSystemVersion&gt;1.0&lt;/urn1:codeSystemVersion&gt;   &lt;urn1:displayName&gt;Medical Claim Documentation Review&lt;/urn1:displayName&gt;   &lt;urn1:originalText&gt;Medical Claim Documentation Review&lt;/urn1:originalText&gt; &lt;/urn1:purposeOfDisclosureCoded&gt; </pre>	R	esMD Requirement / Yes	
6.	samlAuthnStatement	<p>HIH will enter appropriate values. This is used by the CONNECT Gateway for SOAP header SAML processing.</p> <pre> &lt;urn1:samlAuthnStatement&gt;   &lt;urn1:authInstant&gt;2011-01-05T16:50:01.011Z&lt;/urn1:authInstant&gt;   &lt;urn1:sessionIndex&gt;987&lt;/urn1:sessionIndex&gt;   &lt;urn1:authContextClassRef&gt;urn:oasis:names:tc:SAML:2.0:ac:classes:X509&lt;/urn1:authContextClassRef&gt;   &lt;urn1:subjectLocalityAddress&gt;158.147.185.168&lt;/urn1:subjectLocalityAddress&gt;   &lt;urn1:subjectLocalityDNSName&gt;cms.hhs.gov&lt;/urn1:subjectLocalityDNSName&gt; &lt;/urn1:samlAuthnStatement&gt; </pre>	R	esMD Requirement / Yes	

S. No.	SAML Assertion Attribute	Definition and Example	R/ R2/ O	Source / CONNECT Software Allowed	References to esMD Domain Specific Values
7.	samlAuthzDecisionStatement	<p><i>&lt;/urn1:samlAuthnStatement&gt;</i></p> <p>Except ID attribute in samlAuthzDecisionStatement, all the other appropriate values will be entered by HIH.</p> <p>ID attribute will be used by esMD application and other values will be used by the CONNECT Gateway for SOAP header SAML processing.</p> <p>ID attribute will be used to correlate the request to response and to verify the double submission of Claim Document submission. Each Claim Document Submission SOAP Message from CONNECT Gateway will have a Unique ID populated by HIH CONNECT Adapter or CONNECT Compatible software.</p> <p>This unique ID will be created by HIH using the JAVA UUID api and populate into "id" attribute of this SAML Authorization Decision Statement.</p> <p><i>&lt;urn1:id&gt;40df7c0a-ff3e-4b26-baeb-f2910f6d05a9&lt;/urn1:id&gt;</i></p> <p><u>Note:</u> Unique ID is different from CONNECT Gateway Message ID. CONNECT Gateway automatically adds the message id to the SOAP Header. This message ID is unique for any outgoing messages.</p> <p><i>&lt;urn1:samlAuthzDecisionStatement &gt;</i></p> <p><i>&lt;urn1:decision&gt;Permit&lt;/urn1:decision&gt;</i></p> <p><i>&lt;urn1:resource&gt;https://158.147.185.168:8181/esMD/DocumentSubmission&lt;/urn1:resource&gt;</i></p>	R	esMD Requirement / Yes	

S. No.	SAML Assertion Attribute	Definition and Example	R/ R2/ O	Source / CONNECT Software Allowed	References to esMD Domain Specific Values
		<pre> &lt;urn1:action&gt;TestSaml&lt;/urn1:action &gt;   &lt;urn1:evidence&gt;     &lt;urn1:assertion&gt;       &lt;urn1:id&gt;40df7c0a-ff3e- 4b26-baeb-f2910f6d05a9&lt;/urn1:id&gt;       &lt;urn1:issueInstant&gt;2011-01- 05T16:50:01.011Z&lt;/urn1:issueInstan t&gt;        &lt;urn1:version&gt;2.0&lt;/urn1:version&gt;        &lt;urn1:issuerFormat&gt;urn:oasis:name s:tc:SAML:1.1:nameid- format:X509SubjectName&lt;/urn1:issu erFormat&gt;       &lt;urn1:issuer&gt;CN=HIH SAML User,OU=QSSI,O=QSSI,L=Baltimor e,ST=MD,C=US&lt;/urn1:issuer&gt;       &lt;urn1:conditions&gt;         &lt;urn1:notBefore&gt;2011-01- 05T16:50:01.011Z&lt;/urn1:notBefore&gt;         &lt;urn1:notOnOrAfter&gt;2011- 01- 05T16:53:01.011Z&lt;/urn1:notOnOrAft er&gt;          &lt;/urn1:conditions&gt;        &lt;urn1:accessConsentPolicy&gt;Claim- Ref-1234 NA for esMD&lt;/urn1:accessConsentPolicy&gt;        &lt;urn1:instanceAccessConsentPolicy &gt;Claim-Instance-1 NA for esMD&lt;/urn1:instanceAccessConsent Policy&gt;       &lt;/urn1:assertion&gt;     &lt;/urn1:evidence&gt;   &lt;/urn1:samlAuthzDecisionStatement &gt; </pre>			

The CONNECT 4.2 software implementation does not support the “Intended Recipient” and “NPI” fields as a part of assertions.

The Interim solution is to populate the ‘Intended Recipient’ and ‘NPI’ values into ‘uniquePatientId’ and ‘userInfo.userName’ field of the current CONNECT software AssertionType object.

### 5.3.11 SAML Assertion Attributes

This will be added in the Authorization Decision Statement.

### 5.3.12 Version attribute

The version attribute defines SAML v2.0 as the version.

### 5.3.13 ID attribute

The ID Attribute is an xs:ID as defined by <http://www.w3.org/TR/xml-ld/>.

### 5.3.14 Issue Instant

The Issue Instant attribute is an xs:dateTime as defined by <http://www.w3.org/TR/xmlschema-2/>.

### 5.3.15 Issuer

The <Issuer> element identifies the individual gateway system responsible for issuing the Assertions carried in the message. Since esMD does not have the user IDs, the issuer will be the HIH System Name. This element includes a NameID Format attribute, which declares the format used to express the value contained in this element. The Name ID format is **urn:oasis:names:tc:SAML:1.1:nameid-format:X509SubjectName** for sending NHIO acting as a node on the eHealth Exchange.

### 5.3.16 Subject

The Subject element will identify the Subject of the assertion. This element also includes a NameID. The Format attribute declares the format used to express the value contained in this element: the HIH System Name making the request at the initiating NHIO. The Name ID format is **urn:oasis:names:tc:SAML:1.1:nameid-format:X509SubjectName** for the sending NHIO.

### 5.3.17 SAML Statement Elements

The esMD SAML statement elements used are separated into Authentication and Attribute. Each statement will be further defined in the following paragraphs.

### 5.3.18 Attribute Statement

The Attribute Statement element describes a statement by the SAML authority asserting that the requesting HIH system is associated with the specified attributes. The Attribute Statement is required to contain attribute elements as defined by the OASIS XSPA profile of SAML and described in the sections that follow. The Attribute Statement is comprised of the following attributes: Subject Identification (ID), Subject Organization, Home Community ID, Purpose of Use, NPI, and Intended Recipient.

The value on the Subject ID and Subject Organization attributes will be a plain text description of the user's name (not user ID) and organization, respectively. These are primarily intended to support auditing.

#### *Subject ID Attribute*

This Subject Identifier element has the HIH initiating gateway Name. The name of the system as required by HIPAA Privacy Disclosure Accounting is placed in the value of the element.

```
<urn1:QualifiedSubjectIdentifier xmlns:urn1="urn:gov:hhs:fa:nhinc:common:nhinccommon">  
  <urn1:SubjectIdentifier>HIH esMD Initiating Gateway </urn1:SubjectIdentifier >  
  <urn1:AssigningAuthorityIdentifier>HIH Name</urn1: AssigningAuthorityIdentifier >  
</ urn1:QualifiedSubjectIdentifier>
```

#### *Subject Organization Attribute*

This Assigning Authority Identifier element has the subject organization Name under which the initiating gateway (subject name) is running. In plain text, the organization to which the user belongs, as required by HIPAA Privacy Disclosure Accounting, is placed in the value of the Attribute Value element.

```
<urn1:QualifiedSubjectIdentifier xmlns:urn1="urn:gov:hhs:fa:nhinc:common:nhinccommon">
  <urn1:SubjectIdentifier>HIH esMD Initiating Gateway </urn1: SubjectIdentifier >
  <urn1:AssigningAuthorityIdentifier>HIH Name</urn1: AssigningAuthorityIdentifier >
</ urn1:QualifiedSubjectIdentifier>
```

### 5.3.19 Home Community ID Attribute

This attribute element has the HIH gateway Name attribute. The value is the HL7 issued Home Community ID (an Object Identifier) assigned to the HIH that is initiating the request, using the URN format (i.e., "urn:oid:" appended with the OID). One home community gateway can have multiple organization IDs. Organization IDs act as a broker to home community organizations. If there are no brokers to the organizations, then both the home community ID and the organization ID attributes will be the same.

See the sample in the above Table 4: esMD SAML Assertion Details

### 5.3.20 Purpose of Use Attribute

This attribute element has the purpose of use disclosure Name attribute. The value of the attribute element is a child element, "PurposeOfUse", in the namespace "urn:hl7-org:v3", whose content is defined by the "CE" (coded element) data type from the HL7 version 3 specification. The PurposeOfUse element contains the coded representation of the Purpose for Use that is, in effect, for the request. The PurposeOfUse is defined in Authorization Framework document. See the sample in the above Table 4: esMD SAML Assertion Details

### 5.3.21 National Provider Identifier (NPI) Attribute

An NPI is a unique ten (10)-digit identification number issued to health care Providers in the United States by CMS. This attribute provides the ability to specify an NPI value as part of the SAML Assertion that accompanies a message that is transmitted across the eHealth Exchange.

### 5.3.22 Intended Recipients Attribute

Intended Recipients are RCs, to whom the esMD needs to send the HIH submitted Claim Medical documentation payloads. The valid values are addressed in Section 5.3.8.

### 5.3.23 Authentication Statement

The SAML Authentication Assertions are associated with authentication of the Subject (HIH Gateway Identification). The <AuthnStatement> element is required to contain an <AuthnContext> element and an AuthnInstant attribute. The SAML AuthnStatement contains one AuthnContextClassRef element identifying the method by which the subject was authenticated. Other elements of SAML AuthnStatement include <SubjectLocality> element and a SessionIndex attribute. The saml:Authentication is comprised of the 4 Attributes or Elements: AuthnContext, Subject Locality, AuthnInstant, and Session Index.

### 5.3.24 Authentication Method (AuthnContext)

An authentication method, the <AuthnContext> element indicates how that authentication was done. Note that the authentication statement does not provide the means to perform that authentication, such as a password, key, or certificate. This element will contain an authentication context class reference.

*Authentication Method - X.509 Public Key*  
*URN - urn:oasis:names:tc:SAML:2.0:ac:classes:X509*

### 5.3.25 Subject Locality

Subject Locality references from where the user was authenticated. The Subject Locality element specifies the DNS domain name and IP address for the system entity that was authenticated.

### 5.3.26 Authentication Instant (AuthnInstant)

The Authentication Instant, <AuthnInstant>, attribute specifies the time at which the authentication took place which is an xs:dateTime as defined by <http://www.w3.org/TR/xmlschema-2/>.

### 5.3.27 Session Index

The Session Index, *SessionIndex*, attribute identifies the session between the Subject and the Authentication Authority.

### 5.3.28 Example:

See the sample in the above Table 4: esMD SAML Assertion Details.

### 5.3.29 Authorization Decision Statement

This is an optional element that could convey all valid NPI submissions.

The *Authorization Decision Statement* element describes a statement by the SAML authority asserting that a request for access, by the statements subject to the specified resource, has resulted in the specified authorization decision based on some optionally specified evidence. This element provides the HIH an opportunity to assert that it holds an Access Consent Policy which the CMS esMD CONNECT Gateway may wish to evaluate in order to determine if access to the requested resource(s) should be allowed for the submitted Provider.

The information conveyed within the Authorization Decision Statement may be used by the CMS esMD CONNECT Gateway to retrieve the asserted Access Consent Policy. The format of the Access Consent Policy is defined in the Access Consent Policy specification.

The Authorization Decision Statement will be used when the Provider has granted permission to submit the documentation to the CMS esMD CONNECT Gateway, and the HIH needs to make that authorization known to the CMS esMD CONNECT Gateway.

The Authorization Decision Statement has the following content: Action, Decision, Resource, Evidence, and Assertions.

#### 5.3.30 Action

This action must be specified using a value of Execute.

#### 5.3.31 Decision

The Decision attribute of the Authorization Decision Statement must be Permit.

#### 5.3.32 Resource

The Resource attribute of the Authorization Decision Statement must be the Uniform Resource Identifier (URI) of the endpoint to which the CMS esMD CONNECT Gateway request is addressed or an empty URI reference.

#### 5.3.33 Evidence

The Authorization Decision Statement must contain an <Evidence> element, containing a single <Assertion> child element.

### 5.3.34 Assertions

This <Assertion> element must contain an ID attribute, an IssueInstant attribute, a Version attribute, an Issuer element, and an Attribute Statement element. Please, see section 5.3.7.3.1 for more details on building the Assertion.

There must be at least one of the following Attributes in the Attribute Statement.

- An <Attribute> element with the name AccessConsentPolicy and NameFormat <http://www.hhs.gov/healthit/nhin>. The value(s) for this attribute will be the OIDs of the access policies that the asserting entity has previously agreed to with other entities. The OIDs MUST be expressed using the urn format (e.g., - urn:oid:1.2.3.4).
- An <Attribute> element with the name InstanceAccessConsentPolicy and NameFormat <http://www.hhs.gov/healthit/nhin>. The value(s) of this attribute will be the OIDs of the patient specific access policy instances. The OIDs MUST be expressed using the urn format (e.g., - urn:oid:1.2.3.4.123456789). If a requestor specifies this Attribute, the requestor MUST support the ability for the specified policy document(s) to be retrieved via the transactions defined in HITSP TP30.
- The "ContentReference", "ContentType", and "Content" attributes from the Trial Implementation specifications have been removed and should no longer be used.

See the sample in the above [Table 4: esMD SAML Assertion Details](#).

### 5.3.35 Target Communities

The target communities must specify the targeted CMS esMD CONNECT Gateway OID details. It contains three values:

- **Description:** The esMD CONNECT Gateway with an XDR document submission endpoint to accept claim related document submissions to CMS;
- **HomeCommunityId:** The esMD CONNECT Gateway Home Community ID (OID); and
- **Name:** The Name of the esMD CONNECT Gateway Home Community ID (OID).

```
<urn:nhinTargetCommunities>
  <urn1:homeCommunity>
    <urn1:description>
      esMD CONNECT Gateway Home Community ID Description
    </urn1:description>
    <urn1:homeCommunityId>urn:oid:1.3.6.1.4.1.101420.6.1</urn1:homeCommunityId>
    <urn1:name>Name of the esMD CONNECT Gateway Home Community ID</urn1:name>
  </urn1:homeCommunity>
</urn:nhinTargetCommunities>
```

For CMS response Message to HIH, these nhinTargetCommunities will have the HIH OID information.

### 5.3.36 Metadata Fields

The HIH adopts the IHE Cross Enterprise Document Reliable Interchange (XDR) profile in a SOAP envelope with an XDS Repository Submission Request-Provide and Register Document set, b (ITI-41) transaction metadata and C62 document payload with MTOM, base 64 encoded attachments.

```
<urn:ProvideAndRegisterDocumentSetRequest>
<urn2:SubmitObjectsRequest id="999" comment="comment">
  <urn4:RegistryObjectList>
    <urn4:ExtrinsicObject id="Document01" mimeType="application/pdf" objectType="urn:uuid:7edca82f-054d-47f2-a032-9b2a5b5186c1">
      <urn4:RegistryPackage id="SubmissionSet01">
        <urn4:Classification id="classification01" classifiedObject="SubmissionSet01"
          classificationNode="urn:uuid:a54d6aa5-d40d-43f9-88c5-b4633d873bdd"/>
      </urn4:RegistryPackage>
    </urn4:ExtrinsicObject>
  </urn4:RegistryObjectList>
</urn2:SubmitObjectsRequest>
```

```

        <urn4:Association id="association01" associationType="HasMember" sourceObject="SubmissionSet01"
        targetObject="Document01">
    </urn4:RegistryObjectList>

    <urn2:SubmitObjectsRequest>
    <urn5:Document id="Document02">
        <ClinicalDocument ...{Encoded Message}
            .....
            <nonXMLBody>
                2PD943454OJKD2lvbj0iMS4wliBlbmNvZGluZz0iVVRGLTgiPz4NjxDjGluaWNhbERvY3VtZW5=
            </nonXMLBody>
        </ClinicalDocument>
    </urn5:Document>
    <urn5:Document id="Documentnn"> nnPD94bWwgdVj0iMS4wliBlbmNvZGluZz0DLKFALDFALDECjxDjGluaWNhbERvY3VtZW5=
    </urn5:Document>
    </urn:ProvideAndRegisterDocumentSetRequest>
    
```

“**SubmitObjectsRequest**” is a collection of repository metadata of multiple MTOM base64 encoded document attachments transferred between an HIH and the esMD Gateway.

**An ExtrinsicObject (XSDDocumentEntry)** represents a single attached document metadata in the XDR esMD Document Submission SOAP message, which refers to its attached document.

“**RegistryPackage**” is a collection of repository metadata of just one MTOM base64 encoded document.

Following are the esMD Functional (mandatory) and Transmission (mandatory) metadata elements needed for the esMD Gateway to process the submitted claim medical document. For further details on each of the tags, review XDS IHE\_ITI\_TF Volume 3, Revision 6.

### 5.3.37 esMD Functional Specific Submission Set Metadata Attributes

Table 5 details the esMD Functional Specific Submission Set Metadata Attributes to confirm with the IHE ITI Technical Framework Volume 3, Revision 6, and XDR Interoperability Testing.

The following table indicates if the esMD XDR Submission Set metadata attributes are required (R), required if known (R2), optional (O) and XML Element Not Required (NR). To confirm the IHE XDR interoperability test, add xml tag with the value as “NA”, if R2 or Optional.

**Table 5: esMD Functional Specific Submission Set Metadata Attributes**

S. No	esMD XDR Submission Set Metadata Attribute	Definition and Example	R/ R2/O/NR			Metadata Attribute as per Following Standard	References to Possible esMD Domain specific values	XDR Value - Data Type (Length)
			ADR Appeals RAC Discussion Requests ADMC Requests		PMD PA			
			Non Perm	PERM				
1.	esMDClaimID	<p>Claim Identifier is the identifier with which the Provider submits the Claim to CMS. It can be found in the Additional Documentation Request (ADR) letter from the Review Contractor and needs to be used to submit:</p> <ul style="list-style-type: none"> <li>• Documents in response to ADR from the CMS Review Contractor(s);</li> <li>• Appeals</li> <li>• RAC Discussion Requests and</li> <li>• Advanced Determination of Medicare Coverage (ADMC) Requests</li> </ul> <p>Note: The esMDClaimID value for documents sent in responses to ADR, Appeals, RAC Discussion Requests, and ADMC Requests submissions need to be in one of the following formats or the submission shall be</p>	R	NR	NR	esMD Requirement	ADR Letter	HL7 CX data type with string (76)

S. No	esMD XDR Submission Set Metadata Attribute	Definition and Example	R/ R2/O/NR		PMD PA	Metadata Attribute as per Following Standard	References to Possible esMD Domain specific values	XDR Value - Data Type (Length)
			ADR Appeals RAC Discussion Requests ADMC Requests					
			Non Perm	PERM				
		<p>rejected:</p> <ul style="list-style-type: none"> <li>• 13 numeric characters in length, OR</li> <li>• 14 numeric characters in length OR</li> <li>• 15 numeric characters in length; OR</li> <li>• 17 – 23 variable (can include alphabets, numbers, dashes and spaces) characters in length.</li> </ul> <p>From esMD R3.0 onwards, HIH/Providers shall submit the ADR, Appeals, RAC Discussion Requests, and ADMC Requests submissions with esMDClaimID in either of the following two formats (to enable backward compatibility):</p> <ol style="list-style-type: none"> <li>The esMDClaimID could be sent in the HL7 CX composite format, which contains two</li> </ol>						

S. No	esMD XDR Submission Set Metadata Attribute	Definition and Example	R/ R2/O/NR		Metadata Attribute as per Following Standard	References to Possible esMD Domain specific values	XDR Value - Data Type (Length)	
			ADR Appeals RAC Discussion Requests ADMC Requests					PMD PA
			Non Perm	PERM				
		<p>components, the Claim ID number, and the Assigning Authority (AA) like the CMS Review Contractor, which identifies the domain over which the Claim ID number represents a unique entity. The composite format looks like so: <i>Claim ID^^^&amp;RC OID&amp;ISO</i></p> <p>Note: The '&amp;' character must be properly (like &amp;amp;) encoded in the XML content.</p> <p>Note: In the example below the Claim ID value is 13 numeric characters:</p> <pre> &lt;urn4:Slot name="esMDClaimId"&gt;   &lt;urn4:ValueList&gt; &lt;urn4:Value&gt;12345678 90123^^^&amp;amp;2.16.84 0.1.113883.13.34.110.1 .100.1&amp;amp;ISO&lt;/urn4: Value&gt;   &lt;/urn4:ValueList&gt; &lt;/urn4:Slot&gt; </pre>						

S. No	esMD XDR Submission Set Metadata Attribute	Definition and Example	R/ R2/O/NR		Metadata Attribute as per Following Standard	References to Possible esMD Domain specific values	XDR Value - Data Type (Length)	
			ADR Appeals RAC Discussion Requests ADMC Requests					PMD PA
			Non Perm	PERM				
		<p><u>Note:</u> If there are any errors in the composite format, or in the format/length of the esMD Claim ID, the submission shall be rejected.</p> <p>b. or HIHs can send just the esMDClaimId alone, as displayed in the example below:</p> <pre>&lt;urn4:Slot   name="esMDCIaimId"&gt;   &lt;urn4:ValueList&gt;     &lt;urn4:Value&gt;1     234567890123   &lt;/urn4:Value&gt;    &lt;/urn4:ValueList&gt; &lt;/urn4:Slot&gt;</pre> <p><u>Note:</u> If there are any errors in the format/length of the Claim ID, the submission shall be rejected.</p> <p>HIHs/Providers are advised to send the esMD Claim ID in the composite format.</p> <p>Power Mobility Device</p>						

S. No	esMD XDR Submission Set Metadata Attribute	Definition and Example	R/ R2/O/NR			Metadata Attribute as per Following Standard	References to Possible esMD Domain specific values	XDR Value - Data Type (Length)
			ADR Appeals RAC Discussion Requests ADMC Requests		PMD PA			
			Non Perm	PERM				
		(PMD) Prior Authorization (PA) Submissions: Documentation sent in reference to PMD PA shall NOT have an esMDClaimID. HIHs are advised to send PMD PA submission requests without the xml tag for the esMD Claim ID field. If HIHs send a value for the esMDClaimID attribute, the submission shall be rejected.						
2.	esMDCaseld	<p>Case Identifier is the identifier, generated by the Review Contractor to open a claim specific case. This could be found in Additional Documentation Request (ADR) letter from the Review Contractor if the request is from MACs. It can be used to submit:</p> <ul style="list-style-type: none"> <li>• Documents in response to Additional Documentation Request (ADR)</li> <li>• Appeals</li> <li>• RAC Discussion Requests and</li> <li>• ADMC Requests</li> </ul>	R2	R	NR	esMD Requirement	ADR Letter (if MAC is the Review Contractor)	HL7 CX data type with string (76)

S. No	esMD XDR Submission Set Metadata Attribute	Definition and Example	R/ R2/O/NR		Metadata Attribute as per Following Standard	References to Possible esMD Domain specific values	XDR Value - Data Type (Length)	
			ADR Appeals RAC Discussion Requests ADMC Requests					PMD PA
			Non Perm	PERM				
		<p>For submissions to the PERM review contractor, HIHs/Providers need to send the 11 alphanumeric characters PERM ID they get on the ADR from PERM, in the esMDCaselD tag.</p> <p>From esMD R3.0., for submissions related to Responses to ADR, Appeals, RAC Discussion Requests, and ADMC Requests HIHs/Providers shall have a choice to send the esMDCaselD in either of the following two formats (to enable backward compatibility):</p> <ol style="list-style-type: none"> <li>a. The esMDCaselD could be sent in the HL7 CX composite format, which contains two components: the Case ID number and the Assigning Authority (AA) (i.e., the</li> </ol>						

S. No	esMD XDR Submission Set Metadata Attribute	Definition and Example	R/ R2/O/NR		Metadata Attribute as per Following Standard	References to Possible esMD Domain specific values	XDR Value - Data Type (Length)	
			ADR Appeals RAC Discussion Requests ADMC Requests					PMD PA
			Non Perm	PERM				
		<p>CMS Review Contractor that identifies the domain over which the Case ID number represents a unique entity). The composite format: Case ID<sup>^^</sup>&amp;RC OID&amp;ISO</p> <p><u>Note:</u> The '&amp;' character must be properly(like &amp;amp;) encoded in the XML content:</p> <pre> &lt;urn4:Slot   name="esMD   CaseID"&gt;    &lt;urn4:ValueList&gt;   &lt;urn4:Value&gt;   12345678901   234567890A   B<sup>^^</sup>&amp;amp;2.   16.840.1.113   883.13.34.11   0.1.100.1&amp;a   mp;ISO   &lt;/urn4:Value   &gt;    &lt;/urn4:Value   List&gt;   &lt;/urn4:Slot&gt; </pre>						

S. No	esMD XDR Submission Set Metadata Attribute	Definition and Example	R/ R2/O/NR		Metadata Attribute as per Following Standard	References to Possible esMD Domain specific values	XDR Value - Data Type (Length)	
			ADR Appeals RAC Discussion Requests ADMC Requests					PMD PA
			Non Perm	PERM				
		<p>HIHs/Providers are advised to send the esMDCaseID in the HL7 composite format, or</p> <p><b>b.</b> HIHs can send just the esMDCaseIDal one, as displayed in the example below:</p> <pre> &lt;urn4:Slot   name="esMDC   aseld"&gt;   &lt;urn4:ValueList&gt;   &lt;urn4:Value&gt;12345     678901234567     890AB   &lt;/urn4:Value&gt;    &lt;/urn4:ValueList&gt; &lt;/urn4:Slot&gt; </pre> <p><u>Note:</u> Documentation sent in reference to PMD PA shall NOT have esMDCaseID. HIHs are advised to send PMD PA submission requests without the xml tag for the esMDCaseID element.</p> <p><u>Note:</u> If HIHs pass the</p>						

S. No	esMD XDR Submission Set Metadata Attribute	Definition and Example	R/ R2/O/NR			Metadata Attribute as per Following Standard	References to Possible esMD Domain specific values	XDR Value - Data Type (Length)
			ADR Appeals RAC Discussion Requests ADMC Requests		PMD PA			
			Non Perm	PERM				
		esMDCaseID tag or a value for this tag, the submission shall be rejected.						
3.	IntendedRecipient	<p>Intended Recipient represents the organization(s) or person(s) for whom the Document Submission set is intended for:</p> <p>In esMD, the Intended Recipient will be an organization (Review Contractor) to whom the sender (HIH) will submit the message with esMD Claim supporting Documents. This Intended Recipient will be identified by a HL7 issued organizational identifier (OID)</p> <p>Example: Review Contractor OID</p> <pre>&lt;urn4:Slot name="intendedRecipient"&gt;   &lt;urn4:ValueList&gt;     &lt;urn4:Value&gt;2.16.840.1.113883.13.34.110.2.100.1&lt;/urn4:Value&gt;   &lt;/urn4:ValueList&gt; &lt;/urn4:Slot&gt;</pre>	R	R	NR	IHE ITI TF Rel. 6 Vol. 3	See Table 7 in this Implementation Guide	String (64)
4.	Author	Represents the Provider (NPI), who submits the Claim Supporting Documents.	R	R	R	IHE ITI TF Rel. 6 Vol.3	NPI Table 6.1-5 Document	Numeric (10)

S. No	esMD XDR Submission Set Metadata Attribute	Definition and Example	R/ R2/O/NR		Metadata Attribute as per Following Standard	References to Possible esMD Domain specific values	XDR Value - Data Type (Length)	
			ADR Appeals RAC Discussion Requests ADMC Requests					PMD PA
			Non Perm	PERM				
		<p>This document submission could be in response to an Additional Documentation Request letter (ADR) from a CMS Review Contractor, Appeals, RAC Discussion Requests, ADMC Requests or Power Mobility Device (PMD) Prior Authorization (PA).</p> <p>This attribute could either contain the following sub-attributes based on who (either Provider or institution NPI) submits the documentation:</p> <p>This is esMD Required Field.</p> <p>authorInstitution authorPerson</p> <pre>&lt;urn4:Classification id="c108" classificationScheme="urn:uuid: a7058bb9-b4e4-4307-ba5b-e3f0ab85e12d" classifiedObject="SubmissionSet01" nodeRepresentation="author"&gt;   &lt;urn4:Slot name="authorInstitution</pre>				Metadata Attribute Definition in IHE ITI TF Volume 3 Revision 6.0		

S. No	esMD XDR Submission Set Metadata Attribute	Definition and Example	R/ R2/O/NR			Metadata Attribute as per Following Standard	References to Possible esMD Domain specific values	XDR Value - Data Type (Length)
			ADR Appeals RAC Discussion Requests ADMC Requests		PMD PA			
			Non Perm	PERM				
		<pre> "&gt;   &lt;urn4:ValueList&gt;     &lt;urn4:Value&gt;604123&lt;/urn4:Value&gt;   &lt;/urn4:ValueList&gt; &lt;/urn4:Slot&gt; &lt;urn4:Slot name="authorPerson"&gt;   &lt;urn4:ValueList&gt;     &lt;urn4:Value&gt;603111&lt;/urn4:Value&gt;   &lt;/urn4:ValueList&gt; &lt;/urn4:Slot&gt; &lt;/urn4:Classification&gt; </pre>						
5.	authorInstitution (sub-attribute of author)	<p>If there is only one document in the SubmissionSet, authorInstitution attribute of the SubmissionSet will have the same NPI as the one used in the authorInstitution attribute at the document level.</p> <p>If there is more than one document in the SubmissionSet, authorInstitution attribute of the SubmissionSet will have the NPI of the organization/institution, which put together all the documents, included in the SubmissionSet.</p>	R2	R2	R2	IHE ITI TF Rel. 6 Vol.3	NPI Institution Name	Numeric (10)

S. No	esMD XDR Submission Set Metadata Attribute	Definition and Example	R/ R2/O/NR			Metadata Attribute as per Following Standard	References to Possible esMD Domain specific values	XDR Value - Data Type (Length)
			ADR Appeals RAC Discussion Requests ADMC Requests		PMD PA			
			Non Perm	PERM				
		<p><u>Please note:</u> At the SubmissionSet level, either the authorInstitution or the authorPerson attribute will be used but never both.</p> <pre>&lt;urn4:Slot name="authorInstitution"&gt;   &lt;urn4:ValueList&gt;     &lt;urn4:Value&gt;604123&lt;/urn4:Value&gt;   &lt;/urn4:ValueList&gt; &lt;/urn4:Slot&gt;</pre>						
5.1	authorPerson (sub-attribute of author)	<p>If there is only one document in the SubmissionSet, authorPerson attribute of the SubmissionSet will have the same NPI as the one used in the authorPerson attribute at the document level.</p> <p>If there is more than one document in the SubmissionSet, authorPerson attribute of the SubmissionSet will have the NPI of the Provider who put together all the documents in the SubmissionSet.</p> <p><u>Please note:</u> At the SubmissionSet level, either the</p>	R2	R2	R2	IHE ITI TF Rel. 6 Vol.3	NPI Person or Machine Name.	Numeric (10)

S. No	esMD XDR Submission Set Metadata Attribute	Definition and Example	R/ R2/O/NR			Metadata Attribute as per Following Standard	References to Possible esMD Domain specific values	XDR Value - Data Type (Length)
			ADR Appeals RAC Discussion Requests ADMC Requests		PMD PA			
			Non Perm	PERM				
		<p>authorInstitution or the authorPerson attribute will be used but never both.</p> <pre>&lt;urn4:Slot name="authorPerson"&gt;   &lt;urn4:ValueList&gt;     &lt;urn4:Value&gt;603111&lt;/urn4:Value&gt;   &lt;/urn4:ValueList&gt; &lt;/urn4:Slot&gt;</pre>						
6.	Comments	<p>Comments associated with the Submission Set in free form text.</p> <pre>&lt;urn4:Description&gt;   &lt;urn4:LocalizedString value="esMD Claim Document Submission in response to Review Contractor ADR Letter"/&gt; &lt;/urn4:Description&gt;</pre>	O	O	O	IHE ITI TF Rel. 6 Vol.3		String (256)
7.	contentType Code	<p>The ContentTypeCode identifies the line of business for which the HIH/NPI is sending the submission request. The submission request could be:</p> <ol style="list-style-type: none"> <li>1. A response to CMS Review Contractor ADR letter,</li> <li>2. Appeals</li> <li>3. RAC Discussion Requests</li> </ol>	R	R	R	IHE ITI TF Rel. 6 Vol.3	See Table: 9 in this Implementation Guide	String (16)

S. No	esMD XDR Submission Set Metadata Attribute	Definition and Example	R/ R2/O/NR		Metadata Attribute as per Following Standard	References to Possible esMD Domain specific values	XDR Value - Data Type (Length)	
			ADR Appeals RAC Discussion Requests ADMC Requests					PMD PA
			Non Perm	PERM				
		<p>4. Advance Determination of Medicare Coverage (ADMC) Requests or</p> <p>5. Power Mobility Device (PMD) Prior Authorization (PA)</p> <p>Provider The ContentTypeCode is the code that specifies to which line of business (response to ADR, Appeals, RAC Discussion Requests, ADMC Requests, or PMD PA) the submission request belongs.</p> <p><u>Note:</u> In the example below, the contentType code with a value of '1' is used which specifies that this submission request be in response to an additional documentation request (ADR).</p> <pre>&lt;urn4:Classification id="c109" classificationScheme="urn:uuid:aa543740-bdda-424e-8c96-df4873be8500" classifiedObject="SubmissionSet01"</pre>						

S. No	esMD XDR Submission Set Metadata Attribute	Definition and Example	R/ R2/O/NR			Metadata Attribute as per Following Standard	References to Possible esMD Domain specific values	XDR Value - Data Type (Length)
			ADR Appeals RAC Discussion Requests ADMC Requests		PMD PA			
			Non Perm	PERM				
		<pre>nodeRepresentation="2 .16.840.1.113883.13.34 .110.1.1000.1"&gt;   &lt;urn4:Slot name="contentTypeCode"&gt;   &lt;urn4:ValueList&gt;  &lt;urn4:Value&gt;1&lt;/urn4:Value&gt; &lt;/urn4:ValueList&gt; &lt;/urn4:Slot&gt; &lt;urn4:Name&gt;  &lt;urn4:LocalizedString value="Response to Additional Documentation Request (ADR)"/&gt;   &lt;/urn4:Name&gt; &lt;/urn4:Classification&gt;</pre> <p><u>Note:</u> See Table 9 for additional values.</p>						
8.	entryUUID	<p>A unique ID or a globally unique identifier within the document submission request for the SubmissionSet.</p> <p>For example, "SubmissionSet01" can be entryUUID. It can also be in the UUID format.</p> <p>In the below example, "SubmissionSet01" is used as entryUUID. This can also be UUID</p>	R	R	R	IHE ITI TF Rel. 6 Vol.3	Unique Name for each attached document with a submitted document. Either UUID or some unique identifier.	String (64)

S. No	esMD XDR Submission Set Metadata Attribute	Definition and Example	R/ R2/O/NR			Metadata Attribute as per Following Standard	References to Possible esMD Domain specific values	XDR Value - Data Type (Length)
			ADR Appeals RAC Discussion Requests ADMC Requests		PMD PA			
			Non Perm	PERM				
		<p>format.</p> <p>Example:  <code>&lt;urn4:RegistryPackage id="SubmissionSet01"&gt;</code>            ....  <code>&lt;/urn4:RegistryPackag e&gt;</code></p>						
9.	patientId	<p>As per XDR specification, this metadata attribute is mandatory. Currently esMD does not handle patientID.</p> <p>For ADR, Appeals, RAC Discussion Requests, and ADMC Requests use case submissions, HHCs/Providers need to submit the esMDClaimID value in this patientID metadata attribute as follows:</p> <p>The ClaimID value needs to be sent in the HL7 composite format as mentioned under esMDClaimId metadata attribute.</p> <p><i>Note:</i> The '&amp;' character must be properly (like &amp;amp;) encoded in the XML content.</p> <p><code>&lt;urn4:ExternalIdentifier id="ei03" registryObject="Docum</code></p>	R	R	R	IHE ITI TF Rel. 6 Vol.3	CMS RC OID.ClaimID	HL7 CX data type with String (256)

S. No	esMD XDR Submission Set Metadata Attribute	Definition and Example	R/ R2/O/NR		Metadata Attribute as per Following Standard	References to Possible esMD Domain specific values	XDR Value - Data Type (Length)	
			ADR Appeals RAC Discussion Requests ADMC Requests					PMD PA
			Non Perm	PERM				
		<p>ent01" identificationScheme="urn:uuid:6b5aea1a-874d-4603-a4bc-96a0a7b38446" value="1234567890123^^&amp;2.16.840.1.113883.13.34&amp;ISO"&gt; &lt;urn4:Name&gt;</p> <p>&lt;urn4:LocalizedString value="XDSDocumentEntry.patientId"/&gt; &lt;/urn4:Name&gt;</p> <p>&lt;/urn4:ExternalIdentifier&gt;</p> <p><b>Note:</b> To enable backward compatibility, HlHs/Providers may submit this patientId metadata attribute with esMDClaimId value in old format (No HL7 composite format) as follows:</p> <p>&lt;urn4:ExternalIdentifier id="ei03" registryObject="Document01" identificationScheme="urn:uuid:6b5aea1a-874d-4603-a4bc-96a0a7b38446" value="1234567890123"&gt; &lt;urn4:Name&gt;</p> <p>&lt;urn4:LocalizedString value="XDSDocumentE</p>						

S. No	esMD XDR Submission Set Metadata Attribute	Definition and Example	R/ R2/O/NR		Metadata Attribute as per Following Standard	References to Possible esMD Domain specific values	XDR Value - Data Type (Length)	
			ADR Appeals RAC Discussion Requests ADMC Requests					PMD PA
			Non Perm	PERM				
		<p><i>ntry.patientId"/&gt; &lt;/urn4:Name&gt; &lt;/urn4:ExternalIdentifier&gt;</i></p> <p>For PMD PA use case submissions (since there is no ClaimID value), HIHs/Providers may submit the value of "NA" in the HL7 composite format as follows:</p> <pre> &lt;urn4:ExternalIdentifier id="ei03" registryObject="Document01" identificationScheme="urn:uuid:6b5aea1a-874d-4603-a4bc-96a0a7b38446" value="NA^^^&amp;amp;2.16.840.1.113883.13.34&amp;amp;ISO" &gt; &lt;urn4:Name&gt;  &lt;urn4:LocalizedString value="XDSDocumentEntry.patientId"/&gt; &lt;/urn4:Name&gt; &lt;/urn4:ExternalIdentifier&gt; </pre> <p><u>Note:</u> To enable backward compatibility,</p>						

S. No	esMD XDR Submission Set Metadata Attribute	Definition and Example	R/ R2/O/NR		Metadata Attribute as per Following Standard	References to Possible esMD Domain specific values	XDR Value - Data Type (Length)	
			ADR Appeals RAC Discussion Requests ADMC Requests					PMD PA
			Non Perm	PERM				
		<p>HIHs/Providers may submit this patientId metadata attribute with esMDClaimId value in old format (No HL7 composite format):</p> <pre>&lt;urn4:ExternalIdentifier id="ei03" registryObject="Document01" identificationScheme="urn:uuid:6b5aea1a-874d-4603-a4bc-96a0a7b38446" value="NA" &gt; &lt;urn4:Name&gt;  &lt;urn4:LocalizedString value="XDSDocumentEntry.patientId"/&gt; &lt;/urn4:Name&gt; &lt;/urn4:ExternalIdentifier&gt;</pre> <p>For submissions to PERM review contractor (since there is no ClaimID value), HIHs/Providers shall submit the value of "NA" in the HL7 composite format as follows:</p> <pre>&lt;urn4:ExternalIdentifier id="ei03"</pre>						

S. No	esMD XDR Submission Set Metadata Attribute	Definition and Example	R/ R2/O/NR		Metadata Attribute as per Following Standard	References to Possible esMD Domain specific values	XDR Value - Data Type (Length)	
			ADR Appeals RAC Discussion Requests ADMC Requests					PMD PA
			Non Perm	PERM				
		<pre> registryObject=" Document01" identificationSc heme="urn:uuid :6b5aea1a- 874d-4603- a4bc- 96a0a7b38446" value="NA^^&amp; amp;2.16.840.1 .113883.13.34. 110.1.200.2&amp;a mp;ISO" &gt; &lt;urn4:Name&gt;  &lt;urn4:Localized String value="XDSDo cumentEntry.pa tientId"/&gt; &lt;/urn4:Name&gt; &lt;/urn4:ExternalIden tifier&gt;  Note: To enable backward compatibility, HIHs/Providers can also submit this patientId metadata attribute with esMDClaimID value of 'NA' in old format (i.e. no HL7 composite format):  &lt;urn4:ExternalIdent ifier id="ei03" registryObject=" Document01" identificationSc heme="urn:uuid </pre>						

S. No	esMD XDR Submission Set Metadata Attribute	Definition and Example	R/ R2/O/NR			Metadata Attribute as per Following Standard	References to Possible esMD Domain specific values	XDR Value - Data Type (Length)
			ADR Appeals RAC Discussion Requests ADMC Requests		PMD PA			
			Non Perm	PERM				
		<pre> :6b5aea1a-874d-4603-a4bc-96a0a7b38446" value="NA" &gt; &lt;urn4:Name&gt;  &lt;urn4:LocalizedString value="XDSDocumentEntry.patientId"/&gt; &lt;/urn4:Name&gt; &lt;/urn4:ExternalIdentifier&gt; </pre>						
10.	sourceId	<p>Globally unique identifier, in OID format, identifying the Health Information Handler (HIH) Gateway through which document/s are being sent to the CMS esMD Gateway.</p> <pre> &lt;urn4:ExternalIdentifier id="ei04" registryObject="SubmissionSet01" identificationScheme="urn:uuid:554ac39e-e3fe-47fe-b233-965d2a147832" value="12.16.840.1.113883.13.34.110.2"&gt; &lt;urn4:Name&gt;  &lt;urn4:LocalizedString value="XDSSubmissionSet.sourceId"/&gt; &lt;/urn4:Name&gt; &lt;/urn4:ExternalIdentifie </pre>	R	R	R	IHE ITI TF Rel. 6 Vol.3	HIH OID	String (64)

S. No	esMD XDR Submission Set Metadata Attribute	Definition and Example	R/ R2/O/NR			Metadata Attribute as per Following Standard	References to Possible esMD Domain specific values	XDR Value - Data Type (Length)
			ADR Appeals RAC Discussion Requests ADMC Requests		PMD PA			
			Non Perm	PERM				
		r>						
11.	submissionTime	Point in Time when the SubmissionSet was created at the HIH CONNECT Adapter.  <urn4:Slot name="submissionTime"> <urn4:ValueList> <urn4:Value>20041225235050</urn4:Value> </urn4:ValueList> </urn4:Slot>	R	R	R	IHE ITI TF Rel. 6 Vol.3	Timestamp	Date (YYYYMMDDHHMMSS)
12.	Title	Represents the title of the Submission Set. esMD Title for the Document SubmissionSet will be – ‘Claim Supporting Medical Documentation’.  <urn4:Name>  <urn4:LocalizedString value="Claim Supporting Medical Documentation"/> </urn4:Name>	O	O	O	IHE ITI TF Rel. 6 Vol.3	Text	String (256)
13.	unique ID	A globally unique identifier, in OID format, assigned by the HIH to the submission set in the transmission. The length of this Unique Identifier will not exceed 128 bytes.  <urn4:ExternalIdentifier id="ei05"	R	R	R	IHE ITI TF Rel. 6 Vol.3	Unique Identifier will not exceed 128 bytes	TBD

S. No	esMD XDR Submission Set Metadata Attribute	Definition and Example	R/ R2/O/NR		PMD PA	Metadata Attribute as per Following Standard	References to Possible esMD Domain specific values	XDR Value - Data Type (Length)
			ADR Appeals RAC Discussion Requests ADMC Requests					
			Non Perm	PERM				
		<pre>registryObject="SubmissionSet01" identificationScheme=" urn:uuid:96fdda7c- d067-4183-912e- bf5ee74998a8" value="554ac39e- ef6343434-b233- 965d34345555"&gt;   &lt;urn4:Name&gt;    &lt;urn4:LocalizedString value="XDSSubmission Set.uniqueId"/&gt;   &lt;/urn4:Name&gt; &lt;/urn4:ExternalIdentifie r&gt;</pre>						

Table 6 details the esMD specific Document Metadata Attributes to confirm with the IHE ITI Technical Framework Volume 3, Revision 6 and XDR Interoperability Testing.

The following table indicates if the esMD XDR Document metadata attributes are required (R), required if known (R2), optional (O) To confirm IHE XDR interoperability test, add xml tag with the value as "NA", if R2 or Optional.

**Table 6: esMD Document Metadata Attributes**

S. No	esMD XDR Documents Metadata	Definition and Example	R/R2/O	Metadata attribute as per Specific Standard	References to Possible esMD Domain Specific	Data Type (Length)

	a Attribute		ADR Appeals RAC Discussion Requests ADMC Requests		PMD PA		Values	
			Non Perm	P E R M				
1.	Author	<p>Represents the Provider NPI or institution NPI who authored the individual Document included in the Submission Set</p> <p>This attribute contains either the following sub-attributes and never both:</p> <p>authorInstitution authorPerson</p> <pre> &lt;urn4:Classification id="cl01" classificationScheme="urn:uui d:93606bcf-9494-43ec-9b4e- a7748d1a838d" classifiedObject="Document0 1" nodeRepresentation="author" &gt;   &lt;urn4:Slot name="authorInstitution"&gt;     &lt;urn4:ValueList&gt;       &lt;urn4:Value&gt;603111&lt;/urn4:V alue&gt;     &lt;/urn4:ValueList&gt;   &lt;/urn4:Slot&gt;   &lt;urn4:Slot name="authorPerson"&gt;     &lt;urn4:ValueList&gt;       &lt;urn4:Value&gt;603&lt;/urn4:Value &gt;     &lt;/urn4:ValueList&gt;   &lt;/urn4:Slot&gt; &lt;/urn4:Classification&gt; </pre>	R2	R 2	R2	IHE ITI TF Rel. 6 Vol.3	Table 6.1-5 Document Metadata Attribute Definition in IHE ITI TF Volume 3 Revision 6.0	Numeric (10)
1.1.	authorIns titution (sub- attribute of author)	<p>Represents the NPI of the institution or the organization under which the human or machine authored the individual document included in the SubmissionSet.</p> <p>Please note: At the Document Metadata level, either the authorInstitution or the authorPerson attribute will be used but never both.</p>	R2	R 2	R2	IHE ITI TF Rel. 6 Vol.3	Institution NPI of the Provider	Numeric (10)

S. No	esMD XDR Documents Metadata Attribute	Definition and Example	R/R2/O			Metadata attribute as per Specific Standard	References to Possible esMD Domain Specific Values	Data Type (Length)
			ADR Appeals RAC Discussion Requests ADMC Requests		PMD PA			
			Non Perm	P E R M				
		<pre>&lt;urn4:Slot name="authorInstitution"&gt;   &lt;urn4:ValueList&gt;    &lt;urn4:Value&gt;604&lt;/urn4:Value &gt;   &lt;/urn4:ValueList&gt; &lt;/urn4:Slot&gt;</pre>						
1.2.	authorPerson (sub-attribute of author)	<p>Represents the NPI of the Provider who authored the individual document included in the SubmissionSet.</p> <p>Please note: At the Document Metadata level, either the authorInstitution or the authorPerson attribute will be used but never both.</p> <pre>&lt;urn4:Slot name="authorPerson"&gt;   &lt;urn4:ValueList&gt;    &lt;urn4:Value&gt;603&lt;/urn4:Value &gt;   &lt;/urn4:ValueList&gt; &lt;/urn4:Slot&gt;</pre>	R2	R2	IHE ITI TF Rel. 6 Vol.3	Document author NPI	Numeric (10)	
2.	classCode	<p>The code specifying the particular kind of document.</p> <pre>&lt;urn4:Classification id="cl02" classificationScheme="urn:uid:41a5887f-8865-4c09-adf7-e362475b143a" classifiedObject="Document01" nodeRepresentation="2.16.840.1.113883.13.34.110.1.1000.1"&gt;   &lt;urn4:Slot name="classCode"&gt;     &lt;urn4:ValueList&gt;      &lt;urn4:Value&gt;1&lt;/urn4:Value&gt;</pre>	R	R	R	IHE ITI TF Rel. 6 Vol.3	See Table 8 in this Implementation Guide	String (64)

S. No	esMD XDR Documents Metadata Attribute	Definition and Example	R/R2/O			Metadata attribute as per Specific Standard	References to Possible esMD Domain Specific Values	Data Type (Length)
			ADR Appeals RAC Discussion Requests ADMC Requests		PMD PA			
			Non Perm	P E R M				
		<pre>&lt;/urn4:ValueList&gt; &lt;/urn4:Slot&gt; &lt;urn4:Name&gt;   &lt;urn4:LocalizedString value="See Table 8 in this Implementation Guide "/&gt; &lt;/urn4:Name&gt; &lt;/urn4:Classification&gt;</pre>						
3.	classCode Display Name	<p>The name to be displayed for communicating to a human the meaning of the classCode. Will have a single value for each value of classCode used</p> <pre>&lt;urn4:Name&gt;   &lt;urn4:LocalizedString value= "See Table 8 in this Implementation Guide "/&gt; &lt;/urn4:Name&gt;</pre>	R	R	R	IHE ITI TF Rel. 6 Vol.3	See Table 8 in this Implementation Guide	String (256)
4.	Comments	<p>Comments associated with the Document in a free form text format</p> <pre>&lt;urn4:Description&gt;   &lt;urn4:LocalizedString value="esMD Claim Document Submission in response to Review Contractor ADR Letter"/&gt; &lt;/urn4:Description&gt;</pre>	O	O	O	IHE ITI TF Rel. 6 Vol.3		String (256)
5.	confidentialityCode	<p>The code specifying the level of confidentiality of the Document. For esMD, the value is always 'V':</p> <pre>&lt;urn4:Classification id="cl03" classificationScheme="urn:uid:f4f85eac-e6cb-4883-b524-f2705394840f" classifiedObject="Document01" nodeRepresentation="2.16.84.0.1.113883.5.25"&gt;</pre>	R	R	R	IHE ITI TF Rel. 6 Vol.3	See Table : 10 in this Implementation Guide	String (64)

S. No	esMD XDR Documents Metadata Attribute	Definition and Example	R/R2/O			Metadata attribute as per Specific Standard	References to Possible esMD Domain Specific Values	Data Type (Length)
			ADR Appeals RAC Discussion Requests ADMC Requests		PMD PA			
			Non Perm	P E R M				
		<pre> &lt;urn4:Slot name="confidentialityCode"&gt;   &lt;urn4:ValueList&gt;     &lt;urn4:Value&gt;V&lt;/urn4:Value&gt;   &lt;/urn4:ValueList&gt; &lt;/urn4:Slot&gt; &lt;urn4:Name&gt;   &lt;urn4:LocalizedString value="VeryRestricted"/&gt; &lt;/urn4:Name&gt; &lt;/urn4:Classification&gt; </pre>						
6.	creationTime	<p>Represents the time the HIH created the document.</p> <pre> &lt;urn4:Slot name="creationTime"&gt;   &lt;urn4:ValueList&gt;     &lt;urn4:Value&gt;20110101165910&lt;/urn4:Value&gt;   &lt;/urn4:ValueList&gt; &lt;/urn4:Slot&gt; </pre>	R	R	R	IHE ITI TF Rel. 6 Vol.3	Timestamp (DTM). HIH XDR created/submitted timestamp.	Date (YYYYMMDDHHMMSS)
7.	entryUUID	<p>A unique ID or a globally unique identifier for each document in the Submission Set</p> <p>In the below example "Document01" is used as entryUUID. This can also be UUID format.</p> <p>Example:</p> <pre> &lt;urn4:ExtrinsicObject id="Document01" mimeType="application/pdf" objectType="urn:uuid:7edca82f-054d-47f2-a032-9b2a5b5186c1"&gt; &lt;/urn4:ExtrinsicObject&gt; </pre>	R	R	R	IHE ITI TF Rel. 6 Vol.3	Unique Name for each attached document with a submitted document. Either UUID or some unique identifier.	String (64)
8.	formatCode	<p>Globally unique code for specifying the format of the document. For example, the format code for esMD is</p>	R	R	R	IHE ITI TF Rel. 6 Vol.3	See Table : 13 in this Implementation Guide	String (64)

S. No	esMD XDR Documents Metadata Attribute	Definition and Example	R/R2/O			Metadata attribute as per Specific Standard	References to Possible esMD Domain Specific Values	Data Type (Length)
			ADR Appeals RAC Discussion Requests ADCM Requests		PMD PA			
			Non Perm	P E R M				
		<p>HITSP C62 urn:hitsp:c62:cda:pdf.</p> <pre>&lt;urn4:Classification id="cl05" classificationScheme="urn:uid:a09d5840-386c-46f2-b5ad-9c3699a4309d" classifiedObject="Document0 1" nodeRepresentation="2.16.840.1.113883.13.34.110.1.1000.1"&gt;   &lt;urn4:Slot name="formatCode"&gt;     &lt;urn4:ValueList&gt;       &lt;urn4:Value&gt;1&lt;/urn4:Value&gt;     &lt;/urn4:ValueList&gt;   &lt;/urn4:Slot&gt;   &lt;urn4:Name&gt;     &lt;urn4:LocalizedString value="see description from table 10"/&gt;   &lt;/urn4:Name&gt; &lt;/urn4:Classification&gt;</pre>						
9.	Hash	<p>Hash key of the XDR payload – C62 Document attachment based on the SHA1 Hash Algorithm</p> <pre>&lt;urn4:Slot name="hash"&gt;   &lt;urn4:ValueList&gt;     &lt;urn4:Value&gt;ad18814418693512b767676006a21d8ec7291e84&lt;/urn4:Value&gt;   &lt;/urn4:ValueList&gt; &lt;/urn4:Slot&gt;</pre>	R	R	R	IHE ITI TF Rel. 6 Vol3	SHA1 hash	String (256)
10.	healthcareFacilityTypeCode	<p>This code represents the type of organizational, Provider setting of the claim or clinical encounters, or during which the documented act occurred.</p> <p><u>Please note:</u> If the submission request happens to be a</p>	R	R	R	IHE ITI TF Rel. 6 Vol.3	See Table 11 in this Implementation Guide	String (64)

S. No	esMD XDR Documents Metadata Attribute	Definition and Example	R/R2/O			Metadata attribute as per Specific Standard	References to Possible esMD Domain Specific Values	Data Type (Length)
			ADR Appeals RAC Discussion Requests ADCM Requests		PMD PA			
			Non Perm	P E R M				
		<p>response to ADR letter, an Appeal, RAC Discussion Requests, ADCM Requests, or(PMD) Prior Authorization (PA) request, the healthcareFacilityTypeCode with the values of 1 (which represents a HIH) or 2 (which represents a Provider) can be used. Please refer to Table 11 for HealthCare Facility Type Code information.</p> <pre> &lt;urn4:Classification id="cl05" classificationScheme="urn:uui d:f33fb8ac-18af-42cc-ae0e- ed0b0bdb91e1" classifiedObject="Document0 1" nodeRepresentation=" 2.16.840.1.113883.13.34.110. 1.1000.1"&gt; &lt;urn4:Slot name=" healthcareFacilityTypeCode"&gt; &lt;urn4:ValueList&gt;  &lt;urn4:Value&gt;1&lt;/urn4:Value&gt; &lt;/urn4:ValueList&gt; &lt;/urn4:Slot&gt; &lt;urn4:Name&gt; &lt;urn4:LocalizedString value="see description from table"/&gt; &lt;/urn4:Name&gt; &lt;/urn4:Classification&gt; </pre>						
11.	healthcareFacilityTypeCodeDisplay Name	<p>The name to be displayed for communicating to a human the meaning of the healthcareFacilityTypeCode. Will have a single value corresponding to the healthcareFacilityTypeCode.</p> <pre> &lt;urn4:Classification id="cl05" classificationScheme="urn:uui </pre>	R	R	R	IHE ITI TF Rel. 6 Vol.3	See Table 11 in this Implementation Guide	String (128)

S. No	esMD XDR Documents Metadata Attribute	Definition and Example	R/R2/O			Metadata attribute as per Specific Standard	References to Possible esMD Domain Specific Values	Data Type (Length)
			ADR Appeals RAC Discussion Requests ADMC Requests		PMD PA			
			Non Perm	P E R M				
		<pre> d:f33fb8ac-18af-42cc-ae0e-ed0b0bdb91e1" classifiedObject="Document01" nodeRepresentation="2.16.840.1.113883.13.34.110.1.1000.1"&gt; &lt;urn4:Slot name="healthcareFacilityTypeCode"&gt; &lt;urn4:ValueList&gt; &lt;urn4:Value&gt;1&lt;/urn4:Value&gt; &lt;/urn4:ValueList&gt; &lt;/urn4:Slot&gt; &lt;urn4:Name&gt; &lt;urn4:LocalizedString value="see description from table"/&gt; &lt;/urn4:Name&gt; &lt;/urn4:Classification&gt; </pre>						
12.	language Code	<p>Specifies the human language of character data in the document. The values of the attribute are language identifiers as described by the IETF (Internet Engineering Task Force) RFC 3066.</p> <pre> &lt;urn4:Slot name="languageCode"&gt; &lt;urn4:ValueList&gt; &lt;urn4:Value&gt;en-us&lt;/urn4:Value&gt; &lt;/urn4:ValueList&gt; &lt;/urn4:Slot&gt; </pre>	R	R	R	IHE ITI TF Rel. 6 Vol.3	esMD value may be "en-us"	String (16)
13.	mime Type	<p>MIME type of the document.</p> <pre> &lt;urn4:ExtrinsicObject id="Document01" mimeType="application/pdf" objectType="urn:uuid:7edca82f-054d-47f2-a032-9b2a5b5186c1"&gt; .... </pre>	R	R	R	IHE ITI TF Rel. 6 Vol.3	esMD PDF mimeType value shall be only "application/pdf" for PDF documents  NOTE: Mime	String (64)

S. No	esMD XDR Documents Metadata Attribute	Definition and Example	R/R2/O			Metadata attribute as per Specific Standard	References to Possible esMD Domain Specific Values	Data Type (Length)
			ADR Appeals RAC Discussion Requests ADCM Requests		PMD PA			
			Non Perm	P E R M				
		</urn4:ExtrinsicObject>					type is case sensitive.	
14.	patientId	<p>As per XDR specification, this patientId metadata attribute is mandatory. At this moment, esMD does not handle patientID.</p> <p>For ADR, Appeals, RAC Discussion Requests, and ADCM Requests use case submissions, HlHs/Providers need to submit the esMDClaimId value in this patientId metadata attribute as follows:</p> <p>The ClaimID value needs to be sent in the HL7 composite format as mentioned under esMDClaimId metadata attribute:</p> <p><u>Note:</u> The '&amp;' character must be properly (like &amp;amp;) encoded in the XML content.</p> <pre>&lt;urn4:ExternalIdentifier id="ei03" registryObject="Document01" identificationScheme="urn:uuid:6b5aea1a-874d-4603-a4bc-96a0a7b38446" value="1234567890123^^&amp;amp;2.16.840.1.113883.13.34&amp;amp;ISO"&gt;   &lt;urn4:Name&gt;     &lt;urn4:LocalizedString value="XDSDocumentEntry.patientId"/&gt;   &lt;/urn4:Name&gt; &lt;/urn4:ExternalIdentifier&gt;</pre> <p><u>Note:</u> To enable backward</p>	R	R	R	IHE ITI TF Rel. 6 Vol.3	esMD value may be "NA"	HL7 CX Data type with String (256)

S. No	esMD XDR Documents Metadata Attribute	Definition and Example	R/R2/O		Metadata attribute as per Specific Standard	References to Possible esMD Domain Specific Values	Data Type (Length)	
			ADR Appeals RAC Discussion Requests ADCM Requests					PMD PA
			Non Perm	P E R M				
		<p>compatibility, HIHs/Providers may submit this patient metadata attribute with esMDClaimID value in old format (No HL7 composite format) as follows:</p> <pre> &lt;urn4:ExternalIdentifier id="ei03" registryObject="Document01" identificationScheme="urn:uuid:6b5aea1a-874d-4603-a4bc-96a0a7b38446" value="1234567890123"&gt;   &lt;urn4:Name&gt;     &lt;urn4:LocalizedString value="XDSDocumentEntry.patientId"/&gt;   &lt;/urn4:Name&gt; &lt;/urn4:ExternalIdentifier&gt; </pre> <p>For Power Mobility Device (PMD) Prior Authorization (PA) submissions (since there is no ClaimID value), HIHs/Providers may submit the value of "NA" in the HL7 composite format as follows:</p> <pre> &lt;urn4:ExternalIdentifier id="ei03" registryObject="Document01" identificationScheme="urn:uuid:6b5aea1a-874d-4603-a4bc-96a0a7b38446" value="NA^^^&amp;2.16.840.1.113883.13.34&amp;ISO" &gt;   &lt;urn4:Name&gt;     &lt;urn4:LocalizedString </pre>						

S. No	esMD XDR Documents Metadata Attribute	Definition and Example	R/R2/O		Metadata attribute as per Specific Standard	References to Possible esMD Domain Specific Values	Data Type (Length)	
			ADR Appeals RAC Discussion Requests ADMC Requests					PMD PA
			Non Perm	PERM				
		<pre> value="XDSDocumentEntry.patientId"/&gt; &lt;/urn4:Name&gt; &lt;/urn4:ExternalIdentifier&gt;  <b>Note:</b> To enable backward compatibility, HIHs/Providers may submit this patientId metadata attribute with esMDClaimID value in old format (No HL7 composite format):  &lt;urn4:ExternalIdentifier id="ei03" registryObject="Document01" identificationScheme="urn:uuid:6b5aea1a-874d-4603-a4bc-96a0a7b38446" value="NA" &gt; &lt;/urn4:Name&gt;  &lt;urn4:LocalizedString value="XDSDocumentEntry.patientId"/&gt; &lt;/urn4:Name&gt; &lt;/urn4:ExternalIdentifier&gt;  For submissions to PERM review contractor (since there is no ClaimID value), HIHs/Providers shall submit the value of "NA" in the HL7 composite format as follows:  &lt;urn4:ExternalIdentifier id="ei03" registryObject="Document01" identificationScheme="urn:uuid:6b5aea1a- </pre>						

S. No	esMD XDR Documents Metadata Attribute	Definition and Example	R/R2/O		Metadata attribute as per Specific Standard	References to Possible esMD Domain Specific Values	Data Type (Length)	
			ADR Appeals RAC Discussion Requests ADMC Requests					PMD PA
			Non Perm	P E R M				
		<p>874d-4603-a4bc-96a0a7b38446" value="NA&amp;2 .16.840.1.113883.13.34.110.1.200.2&amp; ISO" &gt; &lt;urn4:Name&gt;</p> <p>&lt;urn4:LocalizedString value="XDSDocumentEntry.patientId"/&gt; &lt;/urn4:Name&gt; &lt;/urn4:ExternalIdentifier&gt;</p> <p><b>Note:</b> To enable backward compatibility, HIHs/Providers can also submit this patientId metadata attribute with esMDClaimID value of 'NA' in old format (i.e. no HL7 composite format).</p> <p>&lt;urn4:ExternalIdentifier id="ei03" registryObject="Document01" identificationScheme="urn:uuid:6b5aea1a-874d-4603-a4bc-96a0a7b38446" value="NA" &gt; &lt;urn4:Name&gt;</p> <p>&lt;urn4:LocalizedString value="XDSDocumentEntry.patientId"/&gt; &lt;/urn4:Name&gt; &lt;/urn4:ExternalIdentifier&gt;</p>						
15.	practiceSettingCode	The code specifying the clinical specialty where the act that resulted in the document was performed.	R	R	R	IHE ITI TF Rel.6 Vol.3	esMD value may be "1".	String (64)

S. No	esMD XDR Documents Metadata Attribute	Definition and Example	R/R2/O			Metadata attribute as per Specific Standard	References to Possible esMD Domain Specific Values	Data Type (Length)
			ADR Appeals RAC Discussion Requests ADCM Requests		PMD PA			
			Non Perm	P E R M				
		<p>This value will not be used by esMD (i.e., will be ignored). However, since this field is required by XDR, an input is required. Not applicable to esMD but required by XDR Interoperability.</p> <pre> &lt;urn4:Classification id="c107" classificationScheme="urn:uid:cccf5598-8b07-4b77-a05e-ae952c785ead" classifiedObject="Document0 1" nodeRepresentation="2.16.840.1.113883.13.34.110.1.1000.1"&gt;   &lt;urn4:Slot name="practiceSettingCode"&gt;     &lt;urn4:ValueList&gt;       &lt;urn4:Value&gt;1&lt;/urn4:Value&gt;     &lt;/urn4:ValueList&gt;   &lt;/urn4:Slot&gt;   &lt;urn4:Name&gt;     &lt;urn4:LocalizedString value="Practice Settings Code description"/&gt;   &lt;/urn4:Name&gt; &lt;/urn4:Classification&gt; </pre>						
16.	practiceSettingCode Display Name	<p>The name to be displayed for communicating to a human the meaning of the practiceSettingCode. Will have a single value corresponding to the practiceSettingCode.</p> <p>This value will not be used by esMD (i.e., will be ignored). However, since this field is required by XDR, an input is required. Any possible value</p>	R	R	R	IHE ITI TF Rel. 6 Vol.3	esMD value may be "NA".	String (64)

S. No	esMD XDR Documents Metadata Attribute	Definition and Example	R/R2/O			Metadata attribute as per Specific Standard	References to Possible esMD Domain Specific Values	Data Type (Length)
			ADR Appeals RAC Discussion Requests ADMC Requests		PMD PA			
			Non Perm	P E R M				
		<p>assigned by the sender will be accepted.</p> <pre>&lt;urn4:Name&gt;   &lt;urn4:LocalizedString     value="NA"/&gt; &lt;/urn4:Name&gt;</pre>						
17.	serviceStartTime	<p>Represents the start time of the Provider service being documented.</p> <p>This value will not be used by esMD (i.e., will be ignored). However, since this field is required by XDR, an input is required. Any possible value assigned by the sender will be accepted.</p> <p>Not applicable to esMD but required by XDR Interoperability.</p> <pre>&lt;urn4:Slot   name="serviceStartTime"&gt;   &lt;urn4:ValueList&gt;   &lt;urn4:Value&gt;20110101165910&lt;/urn4:Value&gt;   &lt;/urn4:ValueList&gt; &lt;/urn4:Slot&gt;</pre>	R	R	R	IHE ITI TF Rel. 6 Vol.3	<p>DateTimeStamp (HL7 V2 DTM).</p> <p>To pass the Interoperability Test - entry HIH submitted timestamp.</p>	Date (YYYYM MDDHH MMSS)
18.	serviceStopTime	<p>Represents the stop time of the Provider service being documented.</p> <p>This value will not be used by esMD (i.e., will be ignored). However, since this field is required by XDR, an input is required. Any possible value assigned by the sender will be accepted.</p> <pre>&lt;urn4:Slot   name="serviceStopTime"&gt;   &lt;urn4:ValueList&gt;</pre>	R	R	R	IHE ITI TF Rel. 6 Vol.3	<p>DateTimeStamp (HL7 V2 DTM).</p> <p>To pass the Interoperability Test - entry HIH submitted timestamp.</p>	Date (YYYYM MDDHH MMSS)

S. No	esMD XDR Documents Metadata Attribute	Definition and Example	R/R2/O			Metadata attribute as per Specific Standard	References to Possible esMD Domain Specific Values	Data Type (Length)
			ADR Appeals RAC Discussion Requests ADCM Requests		PMD PA			
			Non Perm	P E R M				
		<pre>&lt;urn4:Value&gt;20110101165910&lt;/urn4:Value&gt; &lt;/urn4:ValueList&gt; &lt;/urn4:Slot&gt;</pre>						
19.	Size	<p>Size in bytes of the C62 attachment byte stream that was provided through the request.</p> <p><u>Note:</u> It is strongly recommended that HIHs/Providers send the correct size of the payload.</p> <pre>&lt;urn4:Slot name="size"&gt;   &lt;urn4:ValueList&gt;     &lt;urn4:Value&gt;1024000&lt;/urn4:Value&gt;   &lt;/urn4:ValueList&gt; &lt;/urn4:Slot&gt;</pre>	R	R	R	IHE ITI TF Rel. 6 Vol.3	In Bytes	Numeric (10,2)
20.	Title	<p>Represents the title of the document. Max length, 128 bytes, UTF-8.</p> <pre>&lt;urn4:ExtrinsicObject id="Document01" mimeType="application/pdf" objectType="urn:uuid:7edca82f-054d-47f2-a032-9b2a5b5186c1"&gt;   &lt;urn4:Name&gt;     &lt;urn4:LocalizedString value="Get value from Table 9"/&gt;   &lt;/urn4:Name&gt; &lt;/urn4:ExtrinsicObject&gt;</pre>	O	O	O	IHE ITI TF Rel. 6 Vol.3	<p>Possible Titles – See Table 12 in this Implementation Guide</p> <p>No validation for this Title</p>	String (256)
21.	typeCode	<p>The code specifying the precise kind of document (e.g., Lab Order, Progress Notes, Orders).</p> <p>Please Note: The codes for</p>	R	R	R	IHE ITI TF Rel. 6 Vol.3		String (64)

S. No	esMD XDR Documents Metadata Attribute	Definition and Example	R/R2/O			Metadata attribute as per Specific Standard	References to Possible esMD Domain Specific Values	Data Type (Length)
			ADR Appeals RAC Discussion Requests ADCM Requests		PMD PA			
			Non Perm	P E R M				
		<p>typeCode metadata element are not defined yet for esMD. HIHs/Providers can send the value of '1' as mentioned in the example below.</p> <p>Also, note that typeCode (a document level metadata element) is different from ContentType code (a submission set metadata element).</p> <pre>&lt;urn4:Classification id="c107" classificationScheme=" urn:uuid:f0306f51-975f-434e- a61c-c59651d33983 " classifiedObject="Document0 1" nodeRepresentation=" 2.16.840.1.113883.13.34.110. 1.1000.1"&gt; &lt;urn4:Slot name=" codingScheme "&gt; &lt;urn4:ValueList&gt;  &lt;urn4:Value&gt;1&lt;/urn4:Value&gt; &lt;/urn4:ValueList&gt; &lt;/urn4:Slot&gt; &lt;urn4:Name&gt; &lt;urn4:LocalizedString value="Progress Note"/&gt; &lt;/urn4:Name&gt; &lt;/urn4:Classification&gt;</pre>						
22.	typeCode Display Name	<p>The name to be displayed for communicating to a human the meaning of the typeCode. Will have a single value for each value of typeCode.</p> <p><u>Please Note:</u> Since the typeCodes are not yet defined for esMD as noted in row 21 of this table (see above), the typeCodeDisplay name can</p>	R	R	R	IHE ITI TF Rel. 6 Vol.3		String (64)

S. No	esMD XDR Documents Metadata Attribute	Definition and Example	R/R2/O			Metadata attribute as per Specific Standard	References to Possible esMD Domain Specific Values	Data Type (Length)
			ADR Appeals RAC Discussion Requests ADMC Requests		PMD PA			
			Non Perm	P E R M				
		<p>have any appropriate name.</p> <pre> &lt;urn4:Classification id="cl07" classificationScheme=" urn:uuid:f0306f51-975f-434e- a61c-c59651d33983 " classifiedObject="Document0 1" nodeRepresentation=" 2.16.840.1.113883.13.34.110. 1.1000.1"&gt; &lt;urn4:Slot name=" codingScheme "&gt; &lt;urn4:ValueList&gt;  &lt;urn4:Value&gt;1&lt;/urn4:Value&gt; &lt;/urn4:ValueList&gt; &lt;/urn4:Slot&gt; &lt;urn4:Name&gt; &lt;urn4:LocalizedString value="Progress Note"/&gt; &lt;/urn4:Name&gt; &lt;/urn4:Classification&gt; </pre>						
23.	legalAuthenticator	<p>The authenticator of the document at the Provider.</p> <pre> &lt;urn4:slot name="legalAuthenticator"&gt; &lt;urn4:ValueList&gt;  &lt;urn4:Value&gt;NA&lt;/urn4:Value &gt; &lt;/urn4:ValueList&gt; &lt;/urn4:slot&gt; </pre>	O	O	O	IHE ITI TF Rel. 6 Vol.3	NA	String (32)
24.	uniqueId	<p>A globally unique identifier assigned by the HIH to each document in the SubmissionSet. The length of the Unique Identifier will not exceed 128 bytes. The structure and format of this ID will be consistent with the specification corresponding to the format attribute. This ID will be generated based on the UUID.</p>	R	R	R R	IHE ITI TF Rel. 6 Vol.3	UUID See ITI TF 4.1.7.2 Volume 3 Revision 6	String (64)

S. No	esMD XDR Documents Metadata Attribute	Definition and Example	R/R2/O			Metadata attribute as per Specific Standard	References to Possible esMD Domain Specific Values	Data Type (Length)
			ADR Appeals RAC Discussion Requests ADCM Requests		PMD PA			
			Non Perm	P E R M				
		<p>Generated based on the UUID. The same ID will be returned with the response message.</p> <pre>&lt;urn4:ExternalIdentifier id="ei02" registryObject="Document01" identificationScheme="urn:uuid:96fdda7c-d067-4183-912e-bf5ee74998a8" value="1.3.6.1.4.1.21367.2005.3.9999.33"&gt;   &lt;urn4:Name&gt;     &lt;urn4:LocalizedString value="XDSDocumentEntry.uniquel"/&gt;   &lt;/urn4:Name&gt; &lt;/urn4:ExternalIdentifier&gt;</pre>						

Table 7 provides the CMS assigned OIDs for each intended recipient, and the esMD Use Cases they accept. Intended recipients are the review contractors who accept the medical documentation submitted by Providers.

**Table 7: Intended Recipient (CMS Review Contractor) OIDs**

S. No.	Review Contractor	Review Contractor Organization Name	CMS assigned OIDs
1.	RAC A	DCS	2.16.840.1.113883.13.34.110.1.100.1
2.	RAC B	CGI	2.16.840.1.113883.13.34.110.1.100.2
3.	RAC C	Connolly	2.16.840.1.113883.13.34.110.1.100.3
4.	RAC D	HDI	2.16.840.1.113883.13.34.110.1.100.4
5.	MAC J5	WPS	2.16.840.1.113883.13.34.110.1.110.5
6.	MAC J6	NGS	2.16.840.1.113883.13.34.110.1.250.1
7.	MAC J8	WPS	2.16.840.1.113883.13.34.110.1.110.8
8.	MAC J9	FCSO	2.16.840.1.113883.13.34.110.1.110.9
9.	MAC J10	Cahaba	2.16.840.1.113883.13.34.110.1.110.10
10.	MAC J11	Palmetto	2.16.840.1.113883.13.34.110.1.110.11

S. No.	Review Contractor	Review Contractor Organization Name	CMS assigned OIDs
11.	MAC J15	CGS	2.16.840.1.113883.13.34.110.1.110.15
12.	MAC JE	Noridian	2.16.840.1.113883.13.34.110.1.110.16
13.	MAC JF	Noridian	2.16.840.1.113883.13.34.110.1.110.3
14.	MAC JH	Novitas Solutions	2.16.840.1.113883.13.34.110.1.110.7
15.	MAC JK	NGS	2.16.840.1.113883.13.34.110.1.110.13
16.	MAC JL	Novitas Solutions	2.16.840.1.113883.13.34.110.1.110.12
17.	CERT	Livanta	2.16.840.1.113883.13.34.110.1.200.1
18.	PERM	A+ Government Solutions	2.16.840.1.113883.13.34.110.1.200.2
19.	ZPIC Z1	Safeguard Services	2.16.840.1.113883.13.34.110.1.300.1
20.	ZPIC Z3	Cahaba	2.16.840.1.113883.13.34.110.1.300.3
21.	ZPIC Z4	Health Integrity, LLC	2.16.840.1.113883.13.34.110.1.300.4
22.	ZPIC Z7	Safeguard Services	2.16.840.1.113883.13.34.110.1.300.7
23.	DME MAC A	NHIC	2.16.840.1.113883.13.34.110.1.150.1
24.	DME MAC B	NGS	2.16.840.1.113883.13.34.110.1.150.2
25.	DME MAC C	CGS	2.16.840.1.113883.13.34.110.1.150.3
26.	DME MAC D	NAS	2.16.840.1.113883.13.34.110.1.150.4
27.	SMRC	SHS	2.16.840.1.113883.13.34.110.1.250.2

**Note:** From the implementation of esMD R1.3, a validation has been put in place to check whether a specific Review Contractor accepts a particular Content Type code. If a Review Contractor does not accept a specific use case (ContentType code), then the submission will be rejected. Please refer to the CMS Government website for the lines of business accepted by each Review Contractor, <http://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/ESMD/Review-Contractors.html>.

**Note:** The Content Type code with the value of “1”, response to Additional Documentation Request Letter is accepted by all review contractors participating in esMD.

The Content Type code with the value of ‘8’ shall be used for Power Mobility Device (PMD) Prior Authorization (PA) request submissions. As noted in the table above, only DME MACs A, B, C and D accept such requests from Providers reside in seven states (CA, IL, MI, NY, NC, FL and TX). For more details, please visit <http://go.cms.gov/PADemo>.

Table 8 provides the ClassCodes and corresponding ClassCode Display Names.  
 Metadata Vocabulary - Class Schema: urn:uuid:41a5887f-8865-4c09-adf7-e362475b143a

**Table 8: ClassCodes and corresponding ClassCode Display Names**

Class Code	Class Code Display Name	Coding Schema / Code System
1	Unstructured	2.16.840.1.113883.13.34.110.1.1000.1 - CMS Schema
2	Structured	2.16.840.1.113883.13.34.110.1.1000.1 - CMS Schema

Table 9 provides the Content Type Codes and Corresponding Content Type Code Display Names. Metadata Vocabulary - Class Schema: urn:uuid:f0306f51-975f-434e-a61c-c59651d33983

**Table 9: Content Type Codes and Corresponding ContentType Code Display Names**

ContentType Code	ContentType Code Display Name	Coding Schema / Code System
1	Response to Additional Documentation Request (ADR)	2.16.840.1.113883.13.34.110.1.1000.1 - CMS Schema
8	Power Mobility Device (PMD) Prior Authorization (PA) Requests	2.16.840.1.113883.13.34.110.1.1000.1 - CMS Schema
9	Appeals	2.16.840.1.113883.13.34.110.1.1000.1 - CMS Schema
10	Advance Determination of Medicare Coverage (ADMC) Request	2.16.840.1.113883.13.34.110.1.1000.1 - CMS Schema
11	RAC Discussion Requests	2.16.840.1.113883.13.34.110.1.1000.1 - CMS Schema

The rows bolded in Table 9 above represent the lines of business for which CMS accepts documentation from Providers/HIHs.

Table 10 provides the Confidentiality Codes.

Metadata Vocabulary - Class Schema: urn:uuid:f4f85eac-e6cb-4883-b524-f2705394840f

Reference URL: <http://xml.coverpages.org/CDA-Release2-Unofficial.html>.

**Table 10: Confidentiality Codes**

Confidentiality Code	Description	Coding Schema / Code System
N	Normal	2.16.840.1.113883.5.25
R	Restricted	2.16.840.1.113883.5.25
<b>V</b>	<b>Very Restricted (default for esMD)</b>	<b>2.16.840.1.113883.5.25</b>

esMD will only accept the Very Restricted Confidentiality Code.

Table 11 provides the HealthCare Facility Type Codes.

Metadata Vocabulary - Class Schema: urn:uuid:f33fb8ac-18af-42cc-ae0e-ed0b0bdb91e1

**Table 11: HealthCare Facility Type Code**

HealthCare Facility Type Code	HealthCare Facility Type Code Display Name	Coding Schema / Code System
1.	Health Information Handler (HIH)	2.16.840.1.113883.13.34.110.1.1000.1 - CMS Class Codes
2.	Health Care Provider	2.16.840.1.113883.13.34.110.1.1000.1 - CMS Class Codes
3.	CMS Review Contractor	2.16.840.1.113883.13.34.110.1.1000.1 - CMS Class Codes

Table 12 provides the Submission Set or Document Title.

**Table 12: Submission Set/Document Title**

Submission Set or Document Title
Solicited Supporting Documentation
Additional Documentation Request
Unsolicited Documentation

Table 13 provides the Document Format Code and Payload Type.

Metadata Vocabulary - Class Schema: urn:uuid:a09d5840-386c-46f2-b5ad-9c3699a4309d

Reference URL:

**Table 13: Document Format Code and Payload Type**

S. No.	Format Code	Format Description	Coding Schema / Code System
1.	HITSP C62 urn:hitsp:c62:cda:pdf	Scanned PDF Document in Clinical Document Architecture (CDA) C62 Construct	2.16.840.1.113883.13.34.110.1.1000.1 - CMS Schema
2.	HITSP C62 urn:hitsp:c62:cda:tiff	Scanned TIFF Document in CDA C62 Construct	2.16.840.1.113883.13.34.110.1.1000.1 - CMS Schema
3.	HITSP C83	HITSP C83	2.16.840.1.113883.13.34.110.1.1000.1 - CMS Schema
4.	HITSP C32	HITSP C32	2.16.840.1.113883.13.34.110.1.1000.1 - CMS Schema
5.	urn:ihe:iti:xds-sd:pdf:2008	Scanned PDF Document in XDS	1.3.6.1.4.1.19376.1.2.3
6.	urn:ihe:iti:xds-sd:text:2008	Scanned Documents with text (XDS-SD)	1.3.6.1.4.1.19376.1.2.3

Table 14 details the overall mapping of the Document submission with the Class and Content Type Codes.

This table shows the possible combinations/mappings between Unsolicited and Solicited Documentation,, Format Code, Class Code, and Type Code.

**Table 14: Overall Mapping of Document Submission with Class and Content Type Codes**

Solicited Supporting and Unsolicited Documentation	FormatCode (Payload Construct)	ClassCode		ContentType	
		Class Code	Class Code Display Name	ContentType Code	ContentType Code Display Name
Solicited Supporting Documentation	HITSP C62	1	Unstructured	1	Response to Additional Documentation Request (ADR)
Unsolicited Documentation	HITSP C62	1	Unstructured	8	Power Mobility Device (PMD) Prior Authorization (PA) Request
Unsolicited Documentation	HITSP C62	1	Unstructured	9	Appeals
Unsolicited Documentation	HITSP C62	1	Unstructured	10	Advance Determination of Medicare Coverage
Unsolicited Documentation	HITSP C62	1	Unstructured	11	RAC Discussion Requests

Note: The table below presents the possible values that will be accepted. If the values sent by the HIH/Provider do not match for the corresponding type of submission request, the submission will be rejected.

**Table 15: Combination of esMD Codes and Claim/Case IDs for Different Types of Submission Requests**

S. No	Type of Submission Request	ContentType Code (SubmissionSet Metadata Attribute)	HealthCare FacilityType Code (Document Metadata Attribute)	Format Code (Document Metadata Attribute)	Class Code (Document Metadata Attribute)	esMDClaimID (SubmissionSet Metadata Attribute)	esMDCaselD (SubmissionSet Metadata Attribute)
1.	Response to ADR	1	1	1	1	Required***	Required if known
		1	2	1	1	Required***	Required if known
2.	Power Mobility Device (PMD) Prior Authorization (PA) Request	8	1	1	1	No esMDClaimID xml metadata attribute tag	No esMDCaselD xml metadata attribute tag
		8	2	1	1	No esMDClaimID xml metadata attribute tag	No esMDCaselD xml metadata attribute tag
3.	Appeals	9	1	1	1	Required***	Required if known
		9	2	1	1	Required***	Required if known
4.	Advance Determination of Medicare Coverage	10	1	1	1	Required***	Required if known
		10	2	1	1	Required***	Required if known
5.	RAC Discussion Requests	11	1	1	1	Required***	Required if known
		11	2	1	1	Required***	Required if known

## HITSP C62 (Construct on top of CDA) Document Constraints

This section outlines the content of the unstructured HITSP C62 Construct (on top of the HL7 CDA) constraints for the document. The requirements specified below are to ensure the presence of a minimum amount of wrapper data in order to enhance description and facilitate submitting the claim documentation.

```

<ClinicalDocument xmlns="urn:hl7-org:v3" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" classCode="DOCCLIN"
moodCode="EVN" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <typeId extension="POCD_HD000040" root="2.16.840.1.113883.1.3"/>
    <id root="eab8765b-1424-47cc-9495-ddc934cf5f5d"/>
    <templateId root="2.16.840.1.113883.10.20.3" assigningAuthorityName="CDT General Header Constraints"/>
    <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.1" assigningAuthorityName="IHE Medical Document"/>
    <templateId root="1.3.6.1.4.1.19376.1.2.20" assigningAuthorityName="IHE Scanned Document"/>
    <templateId root="2.16.840.1.113883.3.88.11.62.1" assigningAuthorityName="HITSP Unstructured Document"/>
    <languageCommunication>
      <templateId root="1.3.6.1.4.1.19376.1.5.3.1.2.1"/>
      <languageCode code="en-US"/>
    </languageCommunication>
    <title>ADR Response Supported Claim Documentation</title>
    <confidentialityCode code="V" codeSystem="2.16.840.1.113883.5.25" codeSystemName="Confidentiality"
displayName="Very Restricted"/>
    <effectiveTime value="20100319083838-0500"/>
    <recordTarget>
      <patientRole>
        <id extension="12345" root="2.16.840.1.113883.3.933"/>
        ...
      </patientRole>
    </recordTarget>
    <author>
      <templateId root="1.3.6.1.4.1.19376.1.2.20.1"/>
      ....
    </author>
    <author>
      <templateId root="1.3.6.1.4.1.19376.1.2.20.2"/>
      ...
    </author>
    <dataEnterer>
      <templateId root="1.3.6.1.4.1.19376.1.2.20.3"/>
      ...
    </dataEnterer>
    <custodian>
      ...
    </custodian>
    <legalAuthenticator>
      ....
    </legalAuthenticator>
    <documentationOf>
      <serviceEvent >
        <effectiveTime>
          <low value="19800127"/>
          <high value="19990522"/>
        </effectiveTime>
      </serviceEvent>
    </documentationOf>
    <component>
      <nonXMLBody>
        <text mediaType="application/pdf" representation="B64">
          JVBERi0xLjMKJcfsj6IKNSAwIG9iago8PC9MZW5ndGggNiAwIFlvRmlsdGVyIC9GbGF0
        </text>
      </nonXMLBody>
    </component>
  </ClinicalDocument>

```

Table 16 details the CDA Document Constraints Specifications.

**Table 16: CDA Document Constraints Specifications**

S. No.	HISTP C62 Construct →HL7 CDA Header Element	Description and Source / Value	R/R 2/O	References to Possible esMD Domain Specific Values
1.	ClinicalDocument/typeld	<p>Fixed, per CDA version in use.</p> <p><i>&lt;typeld extension="POCD_HD000040" root="2.16.840.1.113883.1.3"/&gt;</i></p>	R	
2.	ClinicalDocument/templated	<p>This element will be present. The root attribute will contain the OID, '2.16.840.1.113883.3.88.11.62.1', to indicate what type of document is an XDR document.</p> <p><i>&lt;templated root="2.16.840.1.113883.10.20.3" assigningAuthorityName="CDT General Header Constraints"/&gt;</i></p> <p><i>&lt;templated root="1.3.6.1.4.1.19376.1.5.3.1.1.1" assigningAuthorityName="IHE Medical Document"/&gt;</i></p> <p><i>&lt;templated root="1.3.6.1.4.1.19376.1.2.20" assigningAuthorityName="IHE Scanned Document"/&gt;</i></p> <p><i>&lt;templated root="2.16.840.1.113883.3.88.11.62.1" assigningAuthorityName="HITSP Unstructured Document"/&gt;</i></p>	R	
3.	ClinicalDocument/id	<p>This element will be present. The root attribute will contain the OID, which Represents the unique instance identifier of a clinical document.</p> <p>Computable.</p> <p><i>&lt;id root="eab8765b-1424-47cc-9495-ddc934cf5f5d"/&gt;</i></p>	R	
4.	ClinicalDocument/code	<p>Values for this code are dictated by the CDA R2 documentation, but are permissible to extend to fit the particular use case. Attributes code@code and code@codeSystem will be present.</p>	R	

S. No.	HISTP C62 Construct →HL7 CDA Header Element	Description and Source / Value	R/R 2/O	References to Possible esMD Domain Specific Values
		<p>Entered by the operator, or possibly can be taken from the scanned content.</p> <pre data-bbox="592 604 1149 730">&lt;code="34133-9" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="esMD Document Submission"/&gt;</pre>		
5.	ClinicalDocument/title	<p>This will be present if known.</p> <p>Entered by operator, or possibly can be taken from the scanned content.</p> <pre data-bbox="584 892 1071 953">&lt;title&gt;ADR Response – Supported Claim Documentation&lt;/title&gt;</pre>	R2	
6.	ClinicalDocument/confidentialityCode	<p>Will be assigned by the operator in accordance with the scanning facility policy. The notion or level of confidentiality in the header may not be the same as that in the Affinity Domain, but in certain cases could be used to derive a confidentiality value among those specified by the Affinity Domain. Attributes confidentialityCode@code and confidentialityCode@codeSystem will be present.</p> <p>Assigned by the operator Computed. This is the scan time.</p> <pre data-bbox="584 1402 1104 1528">&lt;confidentialityCode code="V" codeSystem="2.16.840.1.113883.5.25" codeSystemName="Confidentiality" displayName="Very Restricted"/&gt;</pre>	R	See Table 10
7.	ClinicalDocument/effectiveTime	<p>This should denote the time at which the original content was scanned. Signifies the document creation time, when the document first came into being. At a minimum, the time will be precise to the day and will include the time zone offset from GMT.</p> <p>Computed. This is the scan time.</p> <pre data-bbox="779 1854 958 1885">&lt;effectiveTime</pre>	R	

S. No.	HISTP C62 Construct →HL7 CDA Header Element	Description and Source / Value	R/R 2/O	References to Possible esMD Domain Specific Values
		<i>value="20050329224411+0500"/&gt;</i>		
8.	ClinicalDocument/languageCode	<p>This element in accordance with the HL7 CDA R2 documentation specifies the human language of character data.</p> <p>Entered by operator</p> <pre> &lt;languageCommunication&gt;   &lt;templateId     root='1.3.6.1.4.1.19376.1.5.3.1.2.1'/&gt;   &lt;languageCode code='en-US'/&gt; &lt;/languageCommunication&gt; </pre>	R	
9.	ClinicalDocument/recordTarget	<p>The ClinicalDocument/recordTarget contains identifying information about the patient concerned in the original content.</p> <p>Taken from scanned content, supplemented by operator.</p> <pre> &lt;recordTarget&gt;   &lt;patientRole&gt;     &lt;id extension="12345"       root="2.16.840.1.113883.3.933"/&gt;     &lt;addr&gt;       &lt;streetAddressLine&gt;NA&lt;/streetAddressLine&gt;       &lt;city&gt;NA&lt;/city&gt;       &lt;state&gt;NA&lt;/state&gt;       &lt;postalCode&gt;NA&lt;/postalCode&gt;       &lt;country&gt;NA&lt;/country&gt;     &lt;/addr&gt;     &lt;patient&gt;       &lt;name&gt;         &lt;prefix&gt;NA&lt;/prefix&gt;         &lt;given&gt;NA&lt;/given&gt;         &lt;family&gt;NA&lt;/family&gt;       &lt;/name&gt;       &lt;administrativeGenderCode code="F"         codeSystem="2.16.840.1.113883.5.1"/&gt;       &lt;birthTime value="19600127"/&gt;     &lt;/patient&gt;   &lt;/patientRole&gt; </pre>	R	<p>Data is optional for esMD. If submitting, need to provide de-identified data or NA.</p>

S. No.	HISTP C62 Construct →HL7 CDA Header Element	Description and Source / Value	R/R 2/O	References to Possible esMD Domain Specific Values
		<a href="#">&lt;/recordTarget&gt;</a>		

S. No.	HISTP C62 Construct →HL7 CDA Header Element	Description and Source / Value	R/R 2/O	References to Possible esMD Domain Specific Values
10.	ClinicalDocument/author/assignedAuthor/assignedPerson	<p>This element represents the author of the original content. It additionally can 1040 encode the original author's institution in the sub-element represented Organization. Information regarding the original author and his/her institution should be included, if it is known.</p> <p>Taken from scanned content, supplemented by operator. This is the original author.</p> <pre> &lt;author&gt;   &lt;templateId     root="1.3.6.1.4.1.19376.1.2.20.1"/&gt;     &lt;time value="19990522"/&gt;     &lt;assignedAuthor&gt;       &lt;id extension="11111111"         root="1.3.5.35.1.4436.7"/&gt;       &lt;assignedPerson&gt;         &lt;name&gt;           &lt;prefix&gt;NA&lt;/prefix&gt;           &lt;given&gt;NA&lt;/given&gt;           &lt;family&gt;NA&lt;/family&gt;           &lt;suffix&gt;NA&lt;/suffix&gt;         &lt;/name&gt;       &lt;/assignedPerson&gt;       &lt;representedOrganization&gt;         &lt;id extension="aaaaabbbb"           root="1.3.5.35.1.4436.7"/&gt;         &lt;name&gt;NA&lt;/name&gt;       &lt;/representedOrganization&gt;     &lt;/assignedAuthor&gt;   &lt;/author&gt; </pre>	R2	Data is optional for esMD
11.	ClinicalDocument/author/assignedAuthor/authoringDevice	<p>This element will be present and represent the scanning device and software used to produce the scanned content.</p> <p>Can be computed or fixed based on the scanning device and software. This is the information about the scanning device.</p> <pre> 97441496   &lt;name&gt;SOME Scanning   Facility&lt;/name&gt; </pre>	R	Data is optional for esMD

S. No.	HISTP C62 Construct →HL7 CDA Header Element	Description and Source / Value	R/R 2/O	References to Possible esMD Domain Specific Values
		<pre> &lt;addr&gt;   &lt;streetAddressLine&gt;NA&lt;/streetAddressLine&gt;     &lt;city&gt;NA&lt;/city&gt;     &lt;state&gt;NA&lt;/state&gt;   &lt;postalCode&gt;NA&lt;/postalCode&gt;     &lt;country&gt;NA&lt;/country&gt;   &lt;/addr&gt;   &lt;/representedOrganization&gt; &lt;/assignedAuthor&gt; &lt;/author&gt; </pre>		

S. No.	HISTP C62 Construct →HL7 CDA Header Element	Description and Source / Value	R/R 2/O	References to Possible esMD Domain Specific Values
12.	ClinicalDocument/dataEnterer	<p>This element represents the information about the scanner operator.</p> <pre> &lt;dataEnterer&gt;   &lt;templateId     root="1.3.6.1.4.1.19376.1.2.20.3"/&gt;   &lt;time value="20050329224411+0500"/&gt;   &lt;assignedEntity&gt;     &lt;id extension="22222222"       root="1.3.6.4.1.4.1.2835.2"/&gt;     &lt;assignedPerson&gt;       &lt;name&gt;         &lt;prefix&gt;NA.&lt;/prefix&gt;         &lt;given&gt;NA&lt;/given&gt;         &lt;family&gt;NA&lt;/family&gt;       &lt;/name&gt;     &lt;/assignedPerson&gt;   &lt;/assignedEntity&gt; &lt;/dataEnterer&gt; </pre>	R	Data is optional for esMD
13.	ClinicalDocument/custodian	<p>Represents the HIH organization from which the document originates and that is in charge of maintaining the document. The custodian is the steward that is entrusted with the care of the document. Every CDA document has exactly one custodian. In most cases, this will be the scanning facility.</p> <pre> &lt;custodian typeCode="CST"&gt;   &lt;assignedCustodian     classCode="ASSIGNED"&gt;     &lt;representedCustodianOrganization       classCode="ORG"       determinerCode="INSTANCE"&gt;       &lt;id root="1.300011"/&gt;       &lt;name&gt;QSSI INC.&lt;/name&gt;       &lt;telecom use="WP" value="(555)555-5500"/&gt;       &lt;addr&gt;         &lt;streetAddressLine&gt; 100 Governor Warfield Parkway&lt;/streetAddressLine&gt;         &lt;city&gt;Columbia&lt;/city&gt;         &lt;state&gt;MD&lt;/state&gt;         &lt;postalCode&gt;21044&lt;/postalCode&gt; </pre>	R	Data related to HIH and in sync with the Submission set meta data.

S. No.	HISTP C62 Construct →HL7 CDA Header Element	Description and Source / Value	R/R 2/O	References to Possible esMD Domain Specific Values
		<pre> &lt;country/&gt; &lt;/addr&gt; &lt;/representedCustodianOrganization&gt; &lt;/assignedCustodian&gt; &lt;/custodian&gt; </pre>		
14.	ClinicalDocument/documentationOf/serviceEvent/effectiveTime	<p>This element is used to encode the date/time range of the original content. If the original content is representative of a single point in time then the endpoints of the date/time range will be the same. Information regarding this date/time range should be included, if it is known. In many cases, this will have to be supplied by the operator.</p> <p>Denotes the time/date range of the original content.</p> <pre> &lt;documentationOf&gt;   &lt;serviceEvent &gt;     &lt;effectiveTime&gt;       &lt;low value="19800127"/&gt;       &lt;high value="19990522"/&gt;     &lt;/effectiveTime&gt;   &lt;/serviceEvent&gt; &lt;/documentationOf&gt; </pre>	R	
15.	ClinicalDocument/component/nonXML Body	The scanned/base64 encoded content.	R	

97441496The sending Provider may be 1) the Provider whose claim is in question, 2) the Provider who orders the item on service listed on the claim in question, or 3) a Provider who rendered a service related to the claim in question. HIHs may include the digital signature and date stamp associated with the medical record entry being transmitted. Though not required, HIHs may also list the Certification Commission for Health Information Technology (CCHIT) certification number associated with the medical record entry.

## 6 VALIDATION

- A. TLS Authentication
- B. OID Validation (Authorization) - Home Community OID Verification against the CMS Certified HIHs based on CMS On-boarded Process
- C. Check Payload Size
- D. A Copy of Payload is Sent to McAfee Gateway for Virus Scanning
- E. Check for Duplicate Unique ID

- F. Claim reviewer Participation Validation
- G. Affinity Values validation
- H. Document Availability in submission
- I. Base64 SHA1 Decoding Validation for Payload attachments
- J. Review Contractor and ContentType Code cross validation – this is to check whether a particular CMS Review Contractor accepts a particular document submission (e.g., PMD PAR, Response to ADR, Appeals, ADMC Request, RAC Discussion Request).

## 7 ERROR MESSAGES

The following table provides details for each error message. Please refer to Table 19 for the error messages currently used by the esMD Gateway.

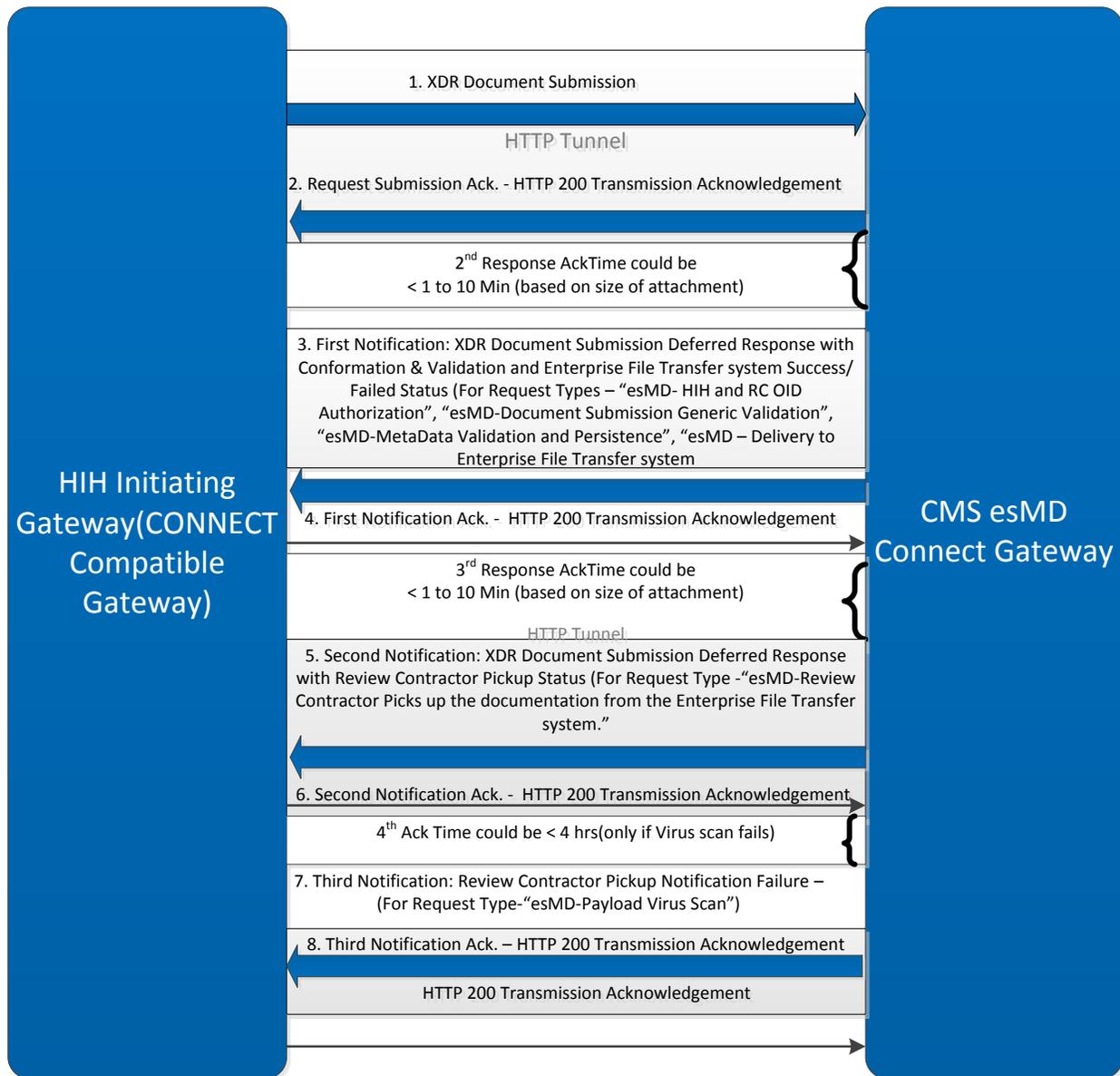
**Table 17: Error Messages**

S.No	Fatal Error Code	Discussion
1.	XDSHOIDIdDoesNotMatch	The XDR specifies where the submitted HIH Home Community IDs must match between documents (i.e., submission sets and CMS On-boarded HIH OID).
2.	XDSDuplicateUniquelDInRegistry	The UniqueID received was not unique within the Registry. The UniqueID could have been attached to earlier XDSSubmissionSet.
3.	XDSMissingDocumentMetadata	The MIME package contains the MIME part with Content-ID header not found.
4.	XDSRegistryMetadataError	An Error was detected in the metadata. The Actor name indicates where the error was detected. The CodeContext indicates the nature of the problem. This error code will be used to convey validation related errors for the following: Class Code, ContentType Code, Format Code, HealthCare Facility Type code, Confidentiality Code, esMDClaimId, esMDCaseld, and NPI. It will also be used to convey errors related to Review Contractor OID and ContentType code cross validation.
5.	XDSMissingDocument	The Metadata exists with no corresponding attached document.
6	XDSNonIdenticalHash	The Hash code of the attached document does not match.
7	<b>CMSDocumentVirus</b> ScanError	Any Antivirus scan failures that occur in the process of delivery and at review contractor end.
8.	XDSRegistryError	Internal esMD Registry/Repository Error
9.	XDSRegistryBusy	Too Much Activity
10.	XDSRegistryOutOfResources	Resources are low

+ Warning messages will be considered as information and will not be categorized as fatal errors. No warning messages have been identified at this time.

## 8 STATUS AND NOTIFICATION MESSAGES

**Figure 4: Document Submission Deferred Responses with Multiple HTTP Connections**



### 8.1 Transport Acknowledgment – HTTP 200 (real Time Acknowledgment)

The HTTP 200 Confirmation message is sent after successful two-way TLS authentication, SAML Assertion validation, and message download.

### 8.2 Syntax and Semantics Validation Status Acknowledgment

Based on following validations, an asynchronous XDR Response message with success or detailed failed acknowledgment messages will be sent out to the HIH:

- Validate the syntaxes;
- Validate Semantics with the esMD affinity domain values;
- Validate Payload Size;
- Validate duplicate Unique ID for the message;
- Validate participation of intended recipient claim reviewers;
- Validate HIH OID authorization based on the CMS On-boarding; and
- Cross validate Review Contractor OID and ContentType Code to check whether a particular Review Contractor accepts a document submission (e.g., PMD PAR, Responses to ADR, Appeals, ADMC, or RAC Discussion Requests).

This acknowledgment will be sent anywhere from less than one minute up to ten minutes after validation and is based on the size of attachment.

### 8.3 Claim Reviewer Delivery Notification- Pickup Status

Response time could be 4 hours or more.

A Notification message will be sent to the HIH after the review contractor picks up the submitted documents from the Enterprise File Transfer (EFT) system. This notification acknowledgment will take an average 4 hours or more after the transaction is sent and is dependent upon the review contractor pulling process of the Enterprise File Transfer (EFT) system.

### 8.4 Review Contractor PickupFailure Notification: Available in a future release

The Response time could be within 4 hours.

This notification message could have an error message in the event there is a Virus scan failure at review contractor end or at the Enterprise File Transfer system.

### 8.5 Service Level Agreement for Acknowledgments

#### 8.5.1 First Acknowledgment - HTTP Status Code

HIHs will take actions based on the HTTP Status code. The HTTP Status code of 200 indicates a successful submission while the HTTP status codes from 300 through 499 indicate the possibility of a fatal error. The esMD Team expects HIHs to take appropriate action to fix fatal errors. The esMD specific HTTP Status codes series will begin from 500.

HTTP status codes are the codes that the client (HIH) Web server uses to communicate with the esMD Web browser or user agent.

The HTTP status codes will allow HIHs to control their Web server with a higher degree of accuracy and effectiveness.

Table 18 indicates the category assigned to each HTTP Status Code numerical series.

**Table 18: HTTP Status Codes**

HTTP Status Code Series	Code Category
HTTP Status Codes 100-101	Informational Status Codes
HTTP Status Codes 200-206	Successful Status Codes
HTTP Status Codes 300-307	Redirection Status Codes
HTTP Status Codes 400-416	Client Error Status Codes
HTTP Status Codes 500-505	Server Error Status Codes

For more details, please visit: [http://webdesign.about.com/od/http/a/http\\_status\\_codes.htm](http://webdesign.about.com/od/http/a/http_status_codes.htm).

### 8.5.2 Delivery to the Enterprise File Transfer system (First Notification)

In the event the sender does not receive the first notification response within 20 minutes of the document submission, the sender may take the following steps.

- The sender can resubmit the claim documentation a second time. After this second submission, the sender should allow 20 minutes to receive an acknowledgement response.

The sender may attempt submissions for a total of three attempts. If the acknowledgement is not received after the third attempt, the sender should contact the CMS esMD Help Desk ([CMSesMDHelpdesk@qssinc.com](mailto:CMSesMDHelpdesk@qssinc.com)) for further resolution.

### 8.5.3 Claim Review Pickup Status Notification (Second Notification)

The sender may take some time, not exceeding eight hours, to receive the second notification. If no response is received after eight hours, the sender should contact the CMS esMD Help Desk ([CMSesMDHelpdesk@qssinc.com](mailto:CMSesMDHelpdesk@qssinc.com)).

### 8.5.4 Claim Reviewer virus scan failure Notification (Third Notification)

This notification message could have an error message in the event there is a virus scan failure at the review contractor end or the Enterprise File Transfer system. After the third notification, the sender may get the fourth acknowledgment within four hours. The submission may be considered successful only if there is no fourth notification response within four hours after the third notification.

## 9 RESPONSE MESSAGE

The XDR Deferred Document Submission Response SOAP message will have the Assertions, Target Communities (as HIH OID, Description, and Name), and Response.

To correlate the request to the response, the unique ID (AssertionType.getSamlAuthzDecisionStatement().getEvidence().getAssertion().getId()) and message ID will be copied back into the response message.

### 9.1 First Acknowledgment:

```
<?xml version="1.0" encoding="UTF-8"?>
<S:Envelope xmlns:S="http://www.w3.org/2003/05/soap-envelope">
  <S:Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://www.w3.org/2005/08/addressing/anonymous</To>
    <Action
      xmlns="http://www.w3.org/2005/08/addressing">urn:gov:hhs:fha:nhinc:nhincentityxdr:async:request:ProvideAndRegisterDocumentSet-bAsyncRequest_ResponseMessage</Action>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">uuid:68ee5397-c4df-46d6-a1e1-3239c1c6f18c</MessageID>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">202</RelatesTo>
  </S:Header>
  <S:Body>
    <ns15:XDRAcknowledgement xmlns:ns2="urn:oasis:names:tc:ebxml-regrep:xsd:query:3.0"
      xmlns:ns3="urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0" xmlns:ns4="urn:oasis:names:tc:ebxml-regrep:xsd:rs:3.0"
      xmlns:ns5="urn:oasis:names:tc:ebxml-regrep:xsd:lcm:3.0" xmlns:ns6="http://www.hhs.gov/healthit/nhin/cdc"
      xmlns:ns7="http://docs.oasis-open.org/wsrf/bf-2" xmlns:ns8="http://www.w3.org/2005/08/addressing" xmlns:ns9="http://docs.oasis-open.org/wsn/b-2"
      xmlns:ns10="urn:gov:hhs:fha:nhinc:common:nhinccommon"
      xmlns:ns11="http://schemas.xmlsoap.org/ws/2004/08/addressing" xmlns:ns12="urn:oasis:names:tc:emergency:EDXL:DE:1.0"
      xmlns:ns13="urn:ihe:iti:xds-b:2007" xmlns:ns14="http://nhinc.services.com/schema/auditmessage"
      xmlns:ns15="http://www.hhs.gov/healthit/nhin" xmlns:ns16="urn:gov:hhs:fha:nhinc:common:subscriptionb2overridefordocuments"
      xmlns:ns17="http://docs.oasis-open.org/wsn/t-1" xmlns:ns18="urn:gov:hhs:fha:nhinc:common:nhinccommonentity"
      xmlns:ns19="urn:gov:hhs:fha:nhinc:common:subscriptionb2overrideforcdc"
      xmlns:ns20="urn:gov:hhs:fha:nhinc:common:subscription">
      <ns15:message status="urn:oasis:names:tc:ebxml-regrep:ResponseStatusType:RequestAccepted"/>
    </ns15:XDRAcknowledgement>
  </S:Body>
</S:Envelope>
```

## 9.2 Success Message without Warnings:

```
<?xml version='1.0' encoding='UTF-8'?>
<S:Envelope xmlns:S="http://www.w3.org/2003/05/soap-envelope">
  <S:Header>
    <To
xmlns="http://www.w3.org/2005/08/addressing">http://localhost:8080/CONNECTAdapter/AdapterComponentXDRResponse_Servi
ce</To>
    <Action
xmlns="http://www.w3.org/2005/08/addressing">urn:gov:hhs:fha:nhinc:adaptercomponentxdrresponse:XDRResponseInputMessag
e</Action>
    <ReplyTo xmlns="http://www.w3.org/2005/08/addressing">
      <Address>http://www.w3.org/2005/08/addressing/anonymous</Address>
    </ReplyTo>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">5a3d7012-029e-4559-9a55-49e3d80d0190</MessageID>
  </S:Header>
  <S:Body>
    <ns21:AdapterRegistryResponse xmlns:ns2="http://schemas.xmlsoap.org/ws/2004/08/addressing"
xmlns:ns3="http://www.w3.org/2005/08/addressing"
xmlns:ns4="http://docs.oasis-open.org/wsn/b-2"
xmlns:ns5="http://docs.oasis-open.org/wsr/bf-2"
xmlns:ns6="http://docs.oasis-open.org/wsn/t-1"
xmlns:ns7="urn:oasis:names:tc:ebxml-regrep:xsd:rs:3.0"
xmlns:ns8="urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0"
xmlns:ns9="urn:oasis:names:tc:ebxml-regrep:xsd:query:3.0"
xmlns:ns10="urn:oasis:names:tc:ebxml-regrep:xsd:lcm:3.0"
xmlns:ns11="http://www.hhs.gov/healthit/nhin"
xmlns:ns12="urn:ihe:iti:xds-b:2007"
xmlns:ns13="http://nhinc.services.com/schema/auditmessage"
xmlns:ns14="http://www.hhs.gov/healthit/nhin/cdc"
xmlns:ns15="urn:gov:hhs:fha:nhinc:common:subscriptionb2overrideforcdc"
xmlns:ns16="urn:oasis:names:tc:xacml:2.0:policy:schema:os"
xmlns:ns17="urn:oasis:names:tc:xacml:2.0:context:schema:os"
xmlns:ns18="urn:oasis:names:tc:emergency:EDXL:DE:1.0"
xmlns:ns19="urn:gov:hhs:fha:nhinc:common:subscriptionb2overridefordocuments"
xmlns:ns20="urn:gov:hhs:fha:nhinc:common:nhinccommon"
xmlns:ns21="urn:gov:hhs:fha:nhinc:common:nhinccommonadapter">
      <ns21:assertion>
        <ns20:haveSecondWitnessSignature>false</ns20:haveSecondWitnessSignature>
        <ns20:haveSignature>false</ns20:haveSignature>
        <ns20:haveWitnessSignature>false</ns20:haveWitnessSignature>
        <ns20:homeCommunity>
          <ns20:homeCommunityId>123.456.657.123</ns20:homeCommunityId>
        </ns20:homeCommunity>
        <ns20:userInfo>
          <ns20:personName>
            <ns20:familyName>na</ns20:familyName>
            <ns20:givenName>CMS</ns20:givenName>
            <ns20:secondNameOrInitials>Given Name - na C CMS Faimily Name -</ns20:secondNameOrInitials>
            <ns20:fullName>CMS Given Name - na C CMS Faimily Name - na</ns20:fullName>
          </ns20:personName>
          <ns20:userName>abcd</ns20:userName>
          <ns20:org>
            <ns20:homeCommunityId>123.456.657.123</ns20:homeCommunityId>
            <ns20:name>QSSI esMD Local Dev Gateway</ns20:name></ns20:org>
            <ns20:roleCoded><ns20:code>2.16.840.1.113883.6.96</ns20:code>
            <ns20:codeSystem>2.16.840.1.113883.6.96</ns20:codeSystem>
            <ns20:codeSystemName>SNOMED_CT</ns20:codeSystemName>
            <ns20:displayName>Claim Processing</ns20:displayName>
          </ns20:roleCoded>
          </ns20:userInfo>
          <ns20:authorized>false</ns20:authorized>
          <ns20:purposeOfDisclosureCoded>
            <ns20:code>2.16.840.1.113883.3.18.7.1</ns20:code>
            <ns20:codeSystem>2.16.840.1.113883.3.18.7.1</ns20:codeSystem>
            <ns20:codeSystemName>nhin-purpose</ns20:codeSystemName>
            <ns20:displayName>Use or disclosure of Psychotherapy Notes</ns20:displayName>
          </ns20:purposeOfDisclosureCoded>
        </ns21:assertion>
      </ns21:AdapterRegistryResponse>
    </S:Body>
  </S:Envelope>
```

```

<ns20:samlAuthnStatement>
  <ns20:authInstant>2009-04-16T13:15:39.000Z</ns20:authInstant>
  <ns20:sessionIndex>987</ns20:sessionIndex>
  <ns20:authContextClassRef>urn:oasis:names:tc:SAML:2.0:ac:classes:X509</ns20:authContextClassRef>
  <ns20:subjectLocalityAddress>158.147.185.168</ns20:subjectLocalityAddress>
  <ns20:subjectLocalityDNSName>esmdg.cms.cmstest</ns20:subjectLocalityDNSName>
</ns20:samlAuthnStatement>
<ns20:samlAuthzDecisionStatement>
  <ns20:decision>Permit</ns20:decision>

<ns20:resource>https://localhost:8191/CONNECTAdapter/AdapterService/AdapterDocSubmissionDeferredResponseSecured</ns20:resource>
  <ns20:action>Execute</ns20:action>
  <ns20:evidence>
    <ns20:assertion>
      <ns20:id>40df7c0a-ff3e-4b26-baeb-f2910f6d0mc202</ns20:id>
      <ns20:issueInstant>2009-04-16T13:10:39.093Z</ns20:issueInstant>
      <ns20:version>2.0</ns20:version>
      <ns20:issuer>CN=SAML User,OU=Harris,O=HITS,L=Melbourne,ST=FL,C=US</ns20:issuer>
      <ns20:issuerFormat>urn:oasis:names:tc:SAML:1.1:nameid-format:X509SubjectName</ns20:issuerFormat>
      <ns20:conditions><ns20:notBefore>2009-04-16T13:10:39.093Z</ns20:notBefore>
        <ns20:notOnOrAfter>2009-12-31T12:00:00.000Z</ns20:notOnOrAfter>
      </ns20:conditions>
      <ns20:accessConsentPolicy>urn:oid:2.16.840.1.113883.13.34.110.3</ns20:accessConsentPolicy>

<ns20:instanceAccessConsentPolicy>urn:oid:2.16.840.1.113883.13.34.110.3</ns20:instanceAccessConsentPolicy>
  </ns20:assertion>
  </ns20:evidence>
</ns20:samlAuthzDecisionStatement>
<ns20:samlSignature>
  <ns20:keyInfo>
    <ns20:rsaKeyValueModulus></ns20:rsaKeyValueModulus>
    <ns20:rsaKeyValueExponent></ns20:rsaKeyValueExponent>
  </ns20:keyInfo>
  <ns20:signatureValue></ns20:signatureValue>
</ns20:samlSignature>
<ns20:messageId>5a3d7012-029e-4559-9a55-49e3d80d0190</ns20:messageId>
</ns21:assertion>
<ns21:RegistryResponse requestId="esMD - Delivery To EFT" status="urn:oasis:names:tc:ebxml-
regrep:ResponseStatusType:Success">
  <ns7:ResponseSlotList>
    <ns8:Slot name="TransactionId">
      <ns8:ValueList>
        <ns8:Value>532</ns8:Value>
      </ns8:ValueList></ns8:Slot>
    <ns8:Slot name="ClaimId">
      <ns8:ValueList>
        <ns8:Value>69777777</ns8:Value>
      </ns8:ValueList></ns8:Slot>
    <ns8:Slot name="CaseId">
      <ns8:ValueList>
        <ns8:Value>6000045</ns8:Value>
      </ns8:ValueList>
    </ns8:Slot>
    <ns8:Slot name="contentTypeCode">
      <ns8:ValueList>
        <ns8:Value>1</ns8:Value>
      </ns8:ValueList>
    </ns8:Slot>
  </ns7:ResponseSlotList>
</ns21:RegistryResponse>
</ns21:AdapterRegistryResponse>
</S:Body>
</S:Envelope>

```

### 9.3 Error Messages:

The error message below serves as a generic XDR error message example. Note the use of errorCode and codeContext below:

```
<?xml version='1.0' encoding='UTF-8'?>
<S:Envelope xmlns:S="http://www.w3.org/2003/05/soap-envelope">
  <S:Header>
    <To xmlns="http://www.w3.org/2005/08/addressing"
      >http://localhost:8080/CONNECTAdapter/AdapterComponentXDRResponse_Service</To>
    <Action xmlns="http://www.w3.org/2005/08/addressing"
      >urn:gov:hhs:fha:nhinc:adaptercomponentxdrresponse:XDRResponseInputMessage</Action>
    <ReplyTo xmlns="http://www.w3.org/2005/08/addressing">
      <Address>http://www.w3.org/2005/08/addressing/anonymous</Address>
    </ReplyTo>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing"
      >5a3d7012-029e-4559-9a55-49e3d80d0190</MessageID>
  </S:Header>
  <S:Body>
    <ns21:AdapterRegistryResponse xmlns:ns2="http://schemas.xmlsoap.org/ws/2004/08/addressing"
      xmlns:ns3="http://www.w3.org/2005/08/addressing"
      xmlns:ns4="http://docs.oasis-open.org/wsn/b-2"
      xmlns:ns5="http://docs.oasis-open.org/wsrf/bf-2"
      xmlns:ns6="http://docs.oasis-open.org/wsn/t-1"
      xmlns:ns7="urn:oasis:names:tc:ebxml-regrep:xsd:rs:3.0"
      xmlns:ns8="urn:oasis:names:tc:ebxml-regrep:xsd:rsm:3.0"
      xmlns:ns9="urn:oasis:names:tc:ebxml-regrep:xsd:query:3.0"
      xmlns:ns10="urn:oasis:names:tc:ebxml-regrep:xsd:lcm:3.0"
      xmlns:ns11="http://www.hhs.gov/healthit/nhin" xmlns:ns12="urn:ihe:iti:xds-b:2007"
      xmlns:ns13="http://nhinc.services.com/schema/auditmessage"
      xmlns:ns14="http://www.hhs.gov/healthit/nhin/cdc"
      xmlns:ns15="urn:gov:hhs:fha:nhinc:common:subscriptionb2overrideforcdc"
      xmlns:ns16="urn:oasis:names:tc:xacml:2.0:policy:schema:os"
      xmlns:ns17="urn:oasis:names:tc:xacml:2.0:context:schema:os"
      xmlns:ns18="urn:oasis:names:tc:emergency:EDXL:DE:1.0"
      xmlns:ns19="urn:gov:hhs:fha:nhinc:common:subscriptionb2overridefordocuments"
      xmlns:ns20="urn:gov:hhs:fha:nhinc:common:nhinccommon"
      xmlns:ns21="urn:gov:hhs:fha:nhinc:common:nhinccommonadapter">
      <ns21:assertion>
        .....
      </ns21:assertion>
      <ns20:RegistryResponse requestId="esMD - Meta Data Validation and Persistence"
        status="urn:oasis:names:tc:ebxml-regrep:ResponseStatusType:Failure">
        <ns10:ResponseSlotList>
          <ns8:Slot name="esMDTransactionId">
            <ns8:ValueList>
              <ns8:Value>0</ns8:Value>
            </ns8:ValueList>
          </ns8:Slot>
          <ns8:Slot name="contentTypeCode">
            <ns8:ValueList>
              <ns8:Value>8</ns8:Value>
            </ns8:ValueList>
          </ns8:Slot>
        </ns10:ResponseSlotList>
        <ns10:RegistryErrorList highestSeverity="ERROR">
          <ns10:RegistryError severity="ERROR" errorCode="XDSRegistryMetadataError"
            codeContext="Error in Metadata – with specific field details."/>
        </ns10:RegistryErrorList>
      </ns20:RegistryResponse>
    </ns21:AdapterRegistryResponse>
  </S:Body>
</S:Envelope>
```

The table below gives the sample first notification response “error message content” that will be sent for different scenarios.

The error messages listed in the table below shall be sent in the First Notification Response.

**Table 19: Sample “Error Message Content**

S. No	Use Case	Scenario	First Notification Error Message
1.	All	Combination of ContentType code, HealthcareFacilityType code, Format code and Class code is incorrect	<pre> &lt;ns10:RegistryErrorList highestSeverity="ERROR"&gt;   &lt;ns10:RegistryError severity="ERROR"     errorCode="XDSRegistryMetadataError"     codeContext="ESMD_315 - The combination of the ContentType     code, HealthcareFacilityType code, Format code and Class code is     incorrect for this type of document submission. Please check the values     of the codes and resubmit."   /&gt; &lt;/ns10:RegistryErrorList&gt; </pre>
2.	All	Invalid ContentType code	<pre> &lt;ns10:RegistryErrorList highestSeverity="ERROR"&gt;   &lt;ns10:RegistryError severity="ERROR"     errorCode="XDSRegistryMetadataError"     codeContext="ESMD_316 - The ContentType code is     incorrect. The submission is not accepted "   /&gt; &lt;/ns10:RegistryErrorList&gt; </pre>
3.	All	Duplicate Submission	<pre> &lt;ns10:RegistryErrorList highestSeverity="ERROR"&gt;   &lt;ns10:RegistryError severity="ERROR"     errorCode="XSDuplicateUniqueIdentRegistry"     codeContext="ESMD_302 - Duplicate Claim document     submission found, the Claim document submission was not accepted."   /&gt; &lt;/ns10:RegistryErrorList&gt; </pre>
4.	All	NPI is incorrect	<pre> &lt;ns10:RegistryErrorList highestSeverity="ERROR"&gt;   &lt;ns10:RegistryError severity="ERROR"     errorCode="XDSRegistryMetadataError"     codeContext="ESMD_312 - Either NPI length or data type is     incorrect; the submission is not accepted."   /&gt; &lt;/ns10:RegistryErrorList&gt; &lt;/ns20:RegistryResponse&gt; </pre>
5.	ADR, Appeals, ADMC Requests and RAC Discussion Requests	Claim ID composite format is incorrect	<pre> &lt;ns10:RegistryErrorList highestSeverity="ERROR"&gt;   &lt;ns10:RegistryError severity="ERROR"     errorCode="XDSRegistryMetadataError"     codeContext="ESMD_318 - The Claim ID was sent in the     incorrect composite format. The correct format needs to be 'Claim ID     ^^^&amp;RCOID&amp;ISO'. Please check the format and resubmit     again."   /&gt; &lt;/ns10:RegistryErrorList&gt; </pre>
6.	ADR, Appeals, ADMC Requests and RAC Discussion Requests	Case ID composite format is incorrect	<pre> &lt;ns10:RegistryErrorList highestSeverity="ERROR"&gt;   &lt;ns10:RegistryError severity="ERROR"     errorCode="XDSRegistryMetadataError"     codeContext="ESMD_319 - The Case ID was sent in the     incorrect composite format. The correct format needs to be 'CaseID     ^^^&amp;RCOID&amp;ISO'. Please check the format and resubmit     again."   /&gt; &lt;/ns10:RegistryErrorList&gt; </pre>

7.	ADR, Appeals, ADCM Requests and RAC Discussion Requests	Case ID is more than 32 characters in length	<pre> &lt;ns10:RegistryErrorList highestSeverity="ERROR"&gt;   &lt;ns10:RegistryError severity="ERROR"     errorCode="XDSRegistryMetadataError"     codeContext="ESMD_311 - Case ID is more than 32 characters;     the submission is not accepted."   /&gt; &lt;/ns10:RegistryErrorList&gt; </pre>
8.	PMD PA	Submission request contains Claim and Case ID tags	<pre> &lt;ns10:RegistryErrorList highestSeverity="ERROR"&gt;   &lt;ns10:RegistryError severity="ERROR"     errorCode="XDSRegistryMetadataError"     codeContext="ESMD_322 - PMD PA requests identified with a     value of '8' for the ContentType code do not have a Case ID. Please     either change the ContentType code or if it is a PMD PA request,     resubmit with no xml tag for the Case ID. "/&gt;   &lt;ns10:RegistryError severity="ERROR"     errorCode="XDSRegistryMetadataError"     codeContext="ESMD_321 - PMD PA requests identified with a     value of '8' for the ContentType code do not have a Claim ID. Please     either change the ContentType code or if it is a PMD PA request,     resubmit with no xml tag for the Claim ID."   /&gt; &lt;/ns10:RegistryErrorList&gt; </pre>
9.	All	Review Contractor does not accept a document submission	<pre> &lt;ns10:RegistryErrorList highestSeverity="ERROR"&gt;   &lt;ns10:RegistryError severity="ERROR"     errorCode="     XDSRegistryMetadataErrorXDSHOIDIdDoesNotMatch"     codeContext="ESMD_317 - The Review Contractor to whom this     submission was sent does not accept this particular document,     identified by the ContentType code. Please change either the Review     Contractor OID or the ContentType Code and submit again."   /&gt; &lt;/ns10:RegistryErrorList&gt; </pre>
10.	ADR, Appeals, ADCM Requests and RAC Discussion Requests	Claim ID for ADR , Appeals, ADCM and RAC discussions does not match either the 13 numeric or 15 numeric or 17-23 varchar	<pre> &lt;ns10:RegistryErrorList highestSeverity="ERROR"&gt;   &lt;ns10:RegistryError severity="ERROR"     errorCode="XDSRegistryMetadataError"     codeContext="ESMD_320 - Either the length or type of the Claim     ID is incorrect. The Claim ID needs to be either 13 numeric or 14     numeric or 15 numeric or 17-23 varchar. Please check the format or     length and resubmit again"   /&gt; &lt;/ns10:RegistryErrorList&gt; </pre>
11.	ADR, Appeals, ADCM Requests and RAC Discussion Requests	For submissions to PERM review contractor a value for esMDClaimId was sent or the PERM ID value which was sent in the esMDCaseld tag is not 11 alphanumeric characters	<pre> &lt;ns10:RegistryErrorList highestSeverity="ERROR"&gt;   &lt;ns10:RegistryError severity="ERROR"     errorCode="XDSRegistryMetadataError"     codeContext="ESMD_323 - For submissions to PERM, the     esMDClaimId value needs to be blank and the esMDCaseld value needs     to be the PERM Id which is 11 alphanumeric characters long. Please     check the values and submit again"   /&gt; &lt;/ns10:RegistryErrorList&gt; </pre>

12.	ADR, PMD PA, Appeals, ADMC Requests and RAC Discussion Requests	XDR submission request sent by the HIH could not be processed by the esMD Gateway because of system issues	<pre> &lt;ns10:RegistryErrorList highestSeverity="ERROR"&gt;   &lt;ns10:RegistryError severity="ERROR"     errorCode="XDSRegistryMetadataError"     codeContext="ESMD_000 - There was an error processing your     request at this time by the esMD Data Application. Please retry. If you     get the same error, please notify the esMD Help Desk."   /&gt; &lt;/ns10:RegistryErrorList&gt; </pre>
			<pre> &lt;ns10:RegistryErrorList highestSeverity="ERROR"&gt;   &lt;ns10:RegistryError severity="ERROR"     errorCode="XDSRegistryMetadataError"     codeContext="ESMD_203 - There was an error validating the     HIH/RC OID because of system issues. Please retry. If you get the same     error, please notify the esMD Help Desk."   /&gt; &lt;/ns10:RegistryErrorList&gt; </pre>
			<pre> &lt;ns10:RegistryErrorList highestSeverity="ERROR"&gt;   &lt;ns10:RegistryError severity="ERROR"     errorCode="XDSRegistryMetadataError"     codeContext="ESMD_313- There was an error validating the     submission metadata because of system issues. Please retry. If you get     the same error, please notify the esMD Help Desk."   /&gt; &lt;/ns10:RegistryErrorList&gt; </pre>
13.	ADR, PMD PA, Appeals, ADMC Requests and RAC Discussion Requests	XDR submission request sent by the HIH gateway cannot be processed by the esMD Gateway since the payload size is more than 50 MB in size.	<pre> &lt;ns3:RegistryErrorList&gt;   &lt;ns3:RegistryError errorCode="XDSRegistryOutOfResources"     codeContext="ESMD_324 - The submission is not accepted     because the esMD Gateway cannot process requests with a payload     size more than 50 MB in size. Please make sure the encoded payload is     less than 50 MB in size and resubmit."   /&gt; &lt;/ns3:RegistryErrorList&gt; </pre>
14.	All	Copy files in Storage Area Network /Storage Area Network area is not available	<pre> &lt;ns3:RegistryErrorList highestSeverity="ERROR"&gt;   &lt;ns3:RegistryError severity="ERROR"     errorCode="XDSRegistryOutOfResources" codeContext="ESMD_001 -     ESMD internal system error Please resubmit. "   /&gt; &lt;/ns3:RegistryErrorList&gt; </pre>
15.	All	File fails to copy to file transfer folder	<pre> &lt;ns3:RegistryErrorList highestSeverity="ERROR"&gt;   &lt;ns3:RegistryError severity="ERROR"     errorCode="XDSRegistryOutOfResources" codeContext="ESMD_002 -     ESMD internal system error (File copy error). Please resubmit."   /&gt; &lt;/ns3:RegistryErrorList&gt; </pre>
16.	All	File contains virus	<pre> &lt;ns10:RegistryErrorList highestSeverity="ERROR"&gt;   &lt;ns10:RegistryError severity="ERROR"     errorCode="CMSDocumentVirusScanError " codeContext="ESMD_127 -     ESMD validation error: Submission is infected with virus xxx."   /&gt; &lt;/ns10:RegistryErrorList&gt; </pre>

17.	All	If file fails to decode	<pre> &lt;ns10:RegistryErrorList highestSeverity="ERROR"&gt;   &lt;ns10:RegistryError severity="ERROR"     errorCode="XDSNonIdenticalHash" codeContext="ESMD_128 - ESMD     Processing error (Unable to decode submission). Please resubmit."   /&gt; &lt;/ns10:RegistryErrorList&gt; </pre>
18.	All	File fails to zip	<pre> &lt;ns3:RegistryErrorList highestSeverity="ERROR"&gt;   &lt;ns3:RegistryError severity="ERROR"     errorCode="XDSRegistryOutOfResources" codeContext="ESMD_400 -     ESMD internal system error (Compression error). Please resubmit."   /&gt; &lt;/ns3:RegistryErrorList&gt; </pre>
19.	All	Payload is missing	<pre> &lt;ns10:RegistryErrorList highestSeverity="ERROR"&gt;   &lt;ns10:RegistryError severity="ERROR"     errorCode="XDSMissingDocument" codeContext="ESMD_369 -     Submission is missing the payload. Please resubmit. " /&gt; &lt;/ns10:RegistryErrorList&gt; </pre>
20.	ADR, PMD PA, Appeals, ADMC and RAC Discussion Requests	Document ID inside metadata does not match the document ID assigned to payload	<pre> &lt;ns10:RegistryErrorList highestSeverity="ERROR"&gt;   &lt;ns10:RegistryError severity="ERROR"     errorCode="XDSRegistryMetadataError" codeContext="ESMD_368 -     validation error: Document ID inside metadata does not match the     Payload Document ID." /&gt; &lt;/ns10:RegistryErrorList&gt; </pre>
21.	All	MIME type is not correct	<pre> &lt;ns10:RegistryErrorList highestSeverity="ERROR"&gt;   &lt;ns10:RegistryError severity="ERROR"     errorCode="XDSMissingDocumentMetadata" codeContext="ESMD_367     - validation error: MIME type is not correct."   /&gt; &lt;/ns10:RegistryErrorList&gt; </pre>
22.	All	Unzip file fails	<pre> &lt;ns10:RegistryErrorList highestSeverity="ERROR"&gt;   &lt;ns10:RegistryError severity="ERROR"     errorCode="XDSRegistryError" codeContext="ESMD_405 - Review     Contractor Client processing error (Unzip failure). Please resubmit."   /&gt; &lt;/ns10:RegistryErrorList&gt; </pre>
23.	All	Checksum does not match	<pre> &lt;ns10:RegistryErrorList highestSeverity="ERROR"&gt;   &lt;ns10:RegistryError severity="ERROR"     errorCode="XDSRegistryError" codeContext="ESMD_406 - Review     Contractor Client processing error (Checksum issue). Please     resubmit."   /&gt; &lt;/ns10:RegistryErrorList&gt; </pre>

## 9.4 Information Contained in Response Message

HIHs should look for the following information in the response message: Message ID, Unique ID, Request ID, Status, and Response Slots.

### 9.4.1 Message ID (Correlated with request MessageID)

To correlate the Request MessageID with the response message, the message ID will be copied back to the response message.

Example:

```

<S:Header>
.....

```

```
<MessageID xmlns="http://www.w3.org/2005/08/addressing">5a3d7012-029e-4559-9a55-49e3d80d0190</MessageID>  
</S:Header>
```

#### 9.4.2 Unique ID (Correlated with request Unique ID)

To correlate the request Unique ID with the response, the Request Unique ID will be copied back to response message under Assertion.ID.

Example:

```
<ns20:assertion>  
<ns20:id>40df7c0a-ff3e-4b26-baeb-f2910f6d0mc202</ns20:id>
```

#### 9.4.3 RequestID

The RequestID explains the type of response Type. The following table lists the possible request types:

**Table 20: Possible Request Types**

S. No.	Request Type String	Request Type in Response Messages
1.	esMD - HIH and Review Contractor OID Authorization esMD - RC OID and ContentType Code Cross Validation	First Notification Response
2.	esMD - Document Submission Generic Validation	
3.	esMD - Meta Data Validation and Persistence	
4.	esMD - Delivery To Enterprise File Transfer System	
5.	esMD - Review Contractor picks up the documents from the Enterprise File Transfer system	Second Notification Response
6.	esMD – Payload Virus Scan	Third Notification Response

Example:

```
<ns21:RegistryResponse requestId="esMD - Delivery To EFT" status="urn:oasis:names:tc:ebxml-regrep:ResponseStatusType:Success">
```

#### 9.4.4 Status

Describes the status of the message:

- A. urn:oasis:names:tc:ebxml-regrep:ResponseStatusType:Success
- B. urn:oasis:names:tc:ebxml-regrep:ResponseStatusType:Warning
- C. urn:oasis:names:tc:ebxml-regrep:ResponseStatusType:Error

Example:

```
<ns21:RegistryResponse requestId="esMD - Delivery To EFT" status="urn:oasis:names:tc:ebxml-regrep:ResponseStatusType:Success">
```

Note: In addition to the statuses listed above, esMD is also using,

- urn:oasis:names:tc:ebxml-regrep:ResponseStatusType:Failure.

In the future, both Error and Failure strings will be merged and only the ‘Error’ string shall be used.

#### 9.4.5 Response Slots

The esMD specific response slots will have esMD transaction information. The information in the slots is related to the following:

- D. TransactionId;
- E. CaselD;
- F. ClaimID; and
- G. ContentType Code.

Example:

```
<ns7:ResponseSlotList>
  <ns8:Slot name="TransactionId">
    <ns8:ValueList>
      <ns8:Value>532</ns8:Value>
    </ns8:ValueList></ns8:Slot>
  <ns8:Slot name="ClaimId">
    <ns8:ValueList>
      <ns8:Value>69777777</ns8:Value>
    </ns8:ValueList></ns8:Slot>
  <ns8:Slot name="CaselD">
    <ns8:ValueList>
```

```

    <ns8:Value>6000045</ns8:Value>
  </ns8:ValueList>
</ns8:Slot>

  <ns8:Slot name="contentTypeCode">
    <ns8:ValueList>
      <ns8:Value>1</ns8:Value>
    </ns8:ValueList>
  </ns8:Slot>
</ns7:ResponseSlotList>

```

## 10 PMD PA OUTBOUND (DME MACs to HIHs)

### 10.1 Overview

Since January 2013, the esMD Gateway is accepting Power Mobility Device Prior Authorization Requests (PMD PARs) from the HIHs. The recipients of these requests are the Durable Medical Equipment (DME) MACs as described earlier in Table 7. These submission requests are identified with a value of '8' for the Content Type Code, which is a submission set metadata element in the XDR submission request sent by the HIHs.

In Release 2.0, which was deployed in June of 2013, the DME MACs acquired the ability to respond electronically to the PMD PARs. These outbound responses shall be called PMD PA review results responses. It is important to note that the DME MACs shall be able to send outbound PMD PA review results responses using esMD for only those PMD PARs, which were sent by the HIHs using inbound esMD. In addition, using outbound esMD, DME MACs shall be able to send only one valid outbound PMD PA review results response for a PMD PAR (i.e., one response per one request).

### 10.2 The PMD PA Review Results Response Layout

The PMD PA review results responses sent by the DME MACs shall be structured, in XML format, and will be composed of the following data elements as described in the table below.

**Table 21: PMD PA Review Results Response Data Elements**

S. No	Data Element Name	Format	Length	Req'd	Values	Field Description
1.	Content Type Code	Numeric	2	Yes	8	The value of this code indicates the line of business. For example, The value '8' indicates a PMD PA request. The Content Type code is sent by the HIHs in the submission request and is passed all the way to the DME MACs. The DME MACs return the code back in the PMD PA review results response message.

S. No	Data Element Name	Format	Length	Req'd	Values	Field Description
2.	TransactionID	Numeric	10	Yes	Assigned by Gateway	TransactionID is generated by the esMD Gateway when a PMD PA request is received from the HIH Gateway. The TransactionId is sent to the DME MACs. The DME MACs shall send the TransactionID back in the PMD PA review results response message.
3.	PMD Decision Indicator	Char	1	Yes	Either of the three possible values: A, N or R	The value of this data element shall indicate whether a PMD PA request has been Affirmed (A), Non affirmed (N), or Rejected (R)
4.	Unique Tracking Number (UTN)	String	64	Situational	Assigned by DME MAC	A unique tracking number assigned by the DME MACs. This number is used by the Provider/DME supplier to file a claim with CMS.
5.	PMD Reason Identifier (DEN Code)	String	12	Situational	example: PMD1A	A coded value to indicate which coverage criterion or documentation requirements were not met by the Provider/DME Supplier

### 10.3 Rules about Situational Data Elements in the PMD PA Review Results Response

As noted in Section 10.2 above, few data elements in the PMD PA review results response are situational. Based on the value of the PMD Decision Indicator, the values of Unique Tracking Number (UTN) and PMD Reason Identifier shall be governed. The table below elaborates this further.

**Table 22: PMD PA Review Results Responses**

S. No	Rule
1.	Affirmed (A) PMD PA review results responses shall contain a Unique Tracking Number (UTN) assigned by the DME MACs
2.	Affirmed (A) PMD PA review results responses shall not contain PMD Reason Identifier(s)
3.	Non affirmed (N) PMD PA review results responses shall contain a Unique Tracking

S. No	Rule
	Number (UTN) provided by the DME MACs
4.	Non affirmed (N) PMD PA review results responses shall contain PMD Reason Identifier(s)
5.	Rejected (R) PMD PA review results responses shall not contain a Unique Tracking Number (UTN)
6.	Rejected (R) PMD PA review results responses shall contain PMD Reason Identifier(s).

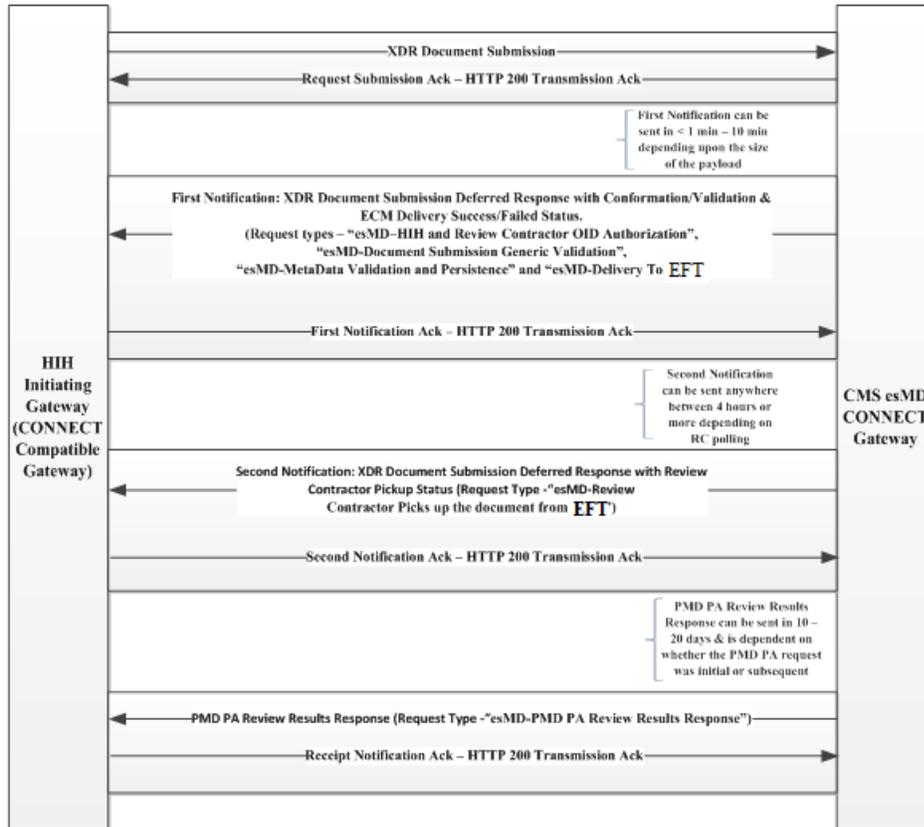
#### 10.4 Note on PMD Reason Identifier (DEN Code)

In a single Non-affirmed (N) or Rejected (R) PMD PA review results response, the DME MACs can send more than one PMD Reason Identifier (DEN Code). It is possible for the DME MACs to send a maximum of up to 50 PMD Reason Identifiers in a single Nonaffirmed or Rejected PMD PA review results response.

Refer to [Appendix G – PMD PA Reason Identifiers and Statements](#) for further information.

## 10.5 Status and Notification Messages for PMD PA

Figure 5: Outbound Response Notification



In the figure above, the very last response refers to the outbound (i.e. from esMD Gateway to HIH) PMD PA Review Results Response and was the new functionality for esMD Release 2.0.

Note: the First and Second Notifications depicted in the above figure are existing notifications sent in response to inbound submissions to the esMD Gateway from the HIHs. Please refer to Sections 8 and 9 of the Implementation Guide for more information on these existing notifications.

## 10.6 Information Contained in the PMD PA Review Results Response

HIHs should look for the following information in the response message: MessageID, UniqueID, Request ID, Status, and Response Slots.

### 10.6.1 MessageID (Shall be correlated with PMD PA request Message ID)

To correlate the PMD PA review results response with the PMD PA request sent by the HIHs, the MessageID sent by the HIHs in the PMD PA request shall be returned in the response message. The MessageID is described in the example below.

```
<ns20:assertion>
-----
-----
<ns19:samlAuthnStatement>
  <ns19:authInstant>2009-04-16T13:15:39Z</ns19:authInstant>
  <ns19:sessionIndex>987</ns19:sessionIndex>
  <ns19:authContextClassRef>urn:oasis:names:tc:SAML:2.0:ac:classes:X509</ns19:authContextClassRef>
  <ns19:subjectLocalityAddress>158.147.185.168</ns19:subjectLocalityAddress>
  <ns19:subjectLocalityDNSName>esmdg.cms.cmstest</ns19:subjectLocalityDNSName>
</ns19:samlAuthnStatement>
<ns19:samlAuthzDecisionStatement>
  <ns19:decision>Permit</ns19:decision>
  <ns19:resource>https://158.147.185.168:8181/SamlReceiveService/SamlProcessWS</ns19:resource>
  <ns19:action>TestSaml</ns19:action>
  <ns19:evidence>
    <ns19:assertion>
      <ns19:id>esmdQSSI_NM_04042013_ADMC_11</ns19:id>
      <ns19:issueInstant>2009-04-16T13:10:39.093Z</ns19:issueInstant>
      <ns19:version>2.0</ns19:version>
      <ns19:issuer>CN=SAML
        User,OU=Harris,O=HITS,L=Melbourne,ST=FL,C=US</ns19:issuer>
      <ns19:issuerFormat>urn:oasis:names:tc:SAML:1.1:nameid-format:X509SubjectName</ns19:issuerFormat>
      <ns19:conditions>
        <ns19:notBefore>2009-04-16T13:10:39.093Z</ns19:notBefore>
        <ns19:notOnOrAfter>2009-12-31T12:00:00.000Z</ns19:notOnOrAfter>
      </ns19:conditions>
      <ns19:accessConsentPolicy>urn:oid:2.16.840.1.113883.13.34.110.3</ns19:accessConsentPolicy>
      <ns19:instanceAccessConsentPolicy>urn:oid:2.16.840.1.113883.13.34.110.3</ns19:instanceAccessConsentPolicy>
    </ns19:assertion>
  </ns19:evidence>
</ns19:samlAuthzDecisionStatement>
<ns19:messageId>uuid:4e0903af-4145-42b1-a06b-45381786bf1c</ns19:messageId>
</ns20:assertion>
```

### 10.6.2 UniqueID (Shall be correlated with PMD PA request Unique ID)

To correlate the PMD PA review results response with the PMD PA request sent by the HIHs, the UniqueID sent by the HIHs in the PMD PA request shall be copied back in the response message. The UniqueID is described in the example below.

```
<urn1:samlAuthzDecisionStatement>
-----
  <urn1:evidence>
    <urn1:assertion>
      <urn1:id>40df7c0a-ff3e-4b26-baeb-f2910f6d05a9testmsgid652012</urn1:id>
    </urn1:assertion>
  </urn1:evidence>
</urn1:samlAuthzDecisionStatement>
```

### 10.6.3 RequestID

The RequestID explains the type of response Type. The following table lists the request type string that shall be used for PMD PA outbound.

**Table 23: PMD PA Outbound Request Type**

S. No.	Request Type String	Request Type in Response Messages
1.	"esMD-PMD PA Review Results Response"	PMD PA Review Results Response

```

<ns20:RegistryResponse
  requestId="esMD-PMD PA Review Results Response"
  status="urn:oasis:names:tc:ebxml-regrep:ResponseStatusType:Success">
  <ns10:ResponseSlotList>
    ---
    ---
  </ns10:ResponseSlotList>
</ns20:RegistryResponse>

```

### 10.6.4 Response Slots

The PMD PA review results response specific slots shall have the response specific information. The following shall be the slots:

1. esMDTransactionId
2. contentTypeCode
3. uniqueTrackingNumber
4. PMDDecisionIndicator
5. PMDReasonIdentifierDtIs

PMDReasonIdentifierDtIs is a list of objects and shall have the PMD Reason Identifier as a child element.

```

<ns5:Slot name="PMDReasonIdentifierDtIs">
  <ns5:ValueList>
    <ns5:Value>PMD1Z</ns5:Value>
  </ns5:ValueList>
</ns5:Slot>
<ns5:Slot name="PMDReasonIdentifierDtIs">
  <ns5:ValueList>
    <ns5:Value>PMD2Z</ns5:Value>
  </ns5:ValueList>
</ns5:Slot>

```

In the above example, the complex data type "PMDReasonIdentifierDtIs" has one child slot:

- The value of the first slot shall carry the PMD Reason Identifier (DEN Code). In the example it is: PMD1Z and PMD2Z.

It is important to note that based on the rules mentioned in Section 10.3, the values of situational data elements should be governed. If a situational value is not present, the xml tag carrying it will not be present in the PMD PA review results response sent by the esMD Gateway to the HIH.

### 10.6.5 Sample Outbound PMD PA Review Results Responses

#### 10.6.5.1 Affirmed PMD PA Review Results Response

A complete outbound affirmed PMD PA review results response is shown below:

```

<S:Envelope xmlns:S="http://www.w3.org/2003/05/soap-envelope">
  <S:Body>
    <ns17:RespondingGateway_ProvideAndRegisterDocumentSetResponseRequest
      xmlns:ns2="http://docs.oasis-open.org/wsrf/bf-2"
      xmlns:ns3="http://www.w3.org/2005/08/addressing"
      xmlns:ns4="http://docs.oasis-open.org/wsn/b-2"
      xmlns:ns5="urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0"
      xmlns:ns6="urn:oasis:names:tc:ebxml-regrep:xsd:rs:3.0"
      xmlns:ns7="http://www.hhs.gov/healthit/nhin"
      xmlns:ns8="urn:oasis:names:tc:ebxml-regrep:xsd:query:3.0"
      xmlns:ns9="urn:oasis:names:tc:ebxml-regrep:xsd:lcm:3.0"
      xmlns:ns10="http://docs.oasis-open.org/wsn/t-1"
      xmlns:ns11="http://www.hhs.gov/healthit/nhin/cdc"
      xmlns:ns12="urn:gov:hhs:fha:nhinc:common:subscriptionb2overrideforcdc"
      xmlns:ns13="urn:oasis:names:tc:emergency:EDXL:DE:1.0"
      xmlns:ns14="urn:ihe:iti:xds-b:2007"
      xmlns:ns15="urn:gov:hhs:fha:nhinc:common:subscriptionb2overridefordocuments"
      xmlns:ns16="urn:gov:hhs:fha:nhinc:common:nhinccommon"
      xmlns:ns17="urn:gov:hhs:fha:nhinc:common:nhinccommonentity"
      xmlns:ns18="http://nhinc.services.com/schema/auditmessage"
      xmlns:ns19="http://schemas.xmlsoap.org/ws/2004/08/addressing"
      xmlns:ns20="urn:gov:hhs:fha:nhinc:common:subscription">
      <ns17:assertion>
        <ns16:address>
          <ns16:addressType>
            <ns16:code>AddrCodeSyst</ns16:code>
            <ns16:codeSystem>AddrCodeSyst</ns16:codeSystem>
            <ns16:codeSystemName>AddrCodeSystName</ns16:codeSystemName>
            <ns16:codeSystemVersion>1.0</ns16:codeSystemVersion>
            <ns16:displayName>AddrCode</ns16:displayName>
            <ns16:originalText>AddrCode</ns16:originalText>
          </ns16:addressType>
          <ns16:city>Baltimore</ns16:city>
          <ns16:country>USA</ns16:country>
          <ns16:state>MD</ns16:state>
          <ns16:streetAddress>7100 Securiry blvd</ns16:streetAddress>
          <ns16:zipCode>21244</ns16:zipCode>
        </ns16:address>
        <ns16:dateOfBirth>03/10/2011 05:21:00</ns16:dateOfBirth>
        <ns16:explanationNonClaimantSignature>Electronic</ns16:explanationNonClaimantSignature>
        <ns16:haveSecondWitnessSignature>>false</ns16:haveSecondWitnessSignature>
        <ns16:haveSignature>>false</ns16:haveSignature>
        <ns16:haveWitnessSignature>>false</ns16:haveWitnessSignature>
        <ns16:homeCommunity>
          <ns16:description>QSSI esMD Dev Gateway in Columbia, MD</ns16:description>
          <ns16:homeCommunityId>123.456.657.123</ns16:homeCommunityId>
          <ns16:name>QSSI esMD Local Dev Gateway</ns16:name>
        </ns16:homeCommunity>
        <ns16:personName>
          <ns16:familyName>CMS Family Name - na</ns16:familyName>
          <ns16:givenName>CMS Given Name - na</ns16:givenName>
          <ns16:nameType>
            <ns16:code>nameCodeSyst</ns16:code>
            <ns16:codeSystem>nameCodeSyst</ns16:codeSystem>
            <ns16:codeSystemName>nameCodeSystName</ns16:codeSystemName>
            <ns16:codeSystemVersion>1.0</ns16:codeSystemVersion>
            <ns16:displayName>nameCode</ns16:displayName>
            <ns16:originalText>nameCode</ns16:originalText>
          </ns16:nameType>
          <ns16:secondNameOrInitials>C</ns16:secondNameOrInitials>
          <ns16:fullName>CMS Given Name. C. Family Name - na</ns16:fullName>
        </ns16:personName>
        <ns16:phoneNumber>
          <ns16:areaCode>410</ns16:areaCode>
          <ns16:countryCode>1</ns16:countryCode>
          <ns16:extension>1234</ns16:extension>
          <ns16:localNumber>567-8901</ns16:localNumber>
          <ns16:phoneNumberType>

```

```

    <ns16:code>phoneCodeSyst</ns16:code>
    <ns16:codeSystem>phoneCodeSyst</ns16:codeSystem>
    <ns16:codeSystemName>phoneCodeSystName</ns16:codeSystemName>
    <ns16:codeSystemVersion>1.0</ns16:codeSystemVersion>
    <ns16:displayName>phoneCode</ns16:displayName>
    <ns16:originalText>phoneCode</ns16:originalText>
  </ns16:phoneNumberType>
</ns16:phoneNumber>
<ns16:secondWitnessAddress>
  <ns16:addressType>
    <ns16:code>AddrCodeSyst</ns16:code>
    <ns16:codeSystem>AddrCodeSyst</ns16:codeSystem>
    <ns16:codeSystemName>AddrCodeSystName</ns16:codeSystemName>
    <ns16:codeSystemVersion>1.0</ns16:codeSystemVersion>
    <ns16:displayName>AddrCode</ns16:displayName>
    <ns16:originalText>AddrCode</ns16:originalText>
  </ns16:addressType>
  <ns16:city>Baltimore</ns16:city>
  <ns16:country>USA</ns16:country>
  <ns16:state>MD</ns16:state>
  <ns16:streetAddress>7100 Securiry blvd</ns16:streetAddress>
  <ns16:zipCode>21244</ns16:zipCode>
</ns16:secondWitnessAddress>
<ns16:secondWitnessName>
  <ns16:familyName>CMS Family Name - na</ns16:familyName>
  <ns16:givenName>CMS Given Name - na</ns16:givenName>
  <ns16:nameType>
    <ns16:code>nameCodeSyst</ns16:code>
    <ns16:codeSystem>nameCodeSyst</ns16:codeSystem>
    <ns16:codeSystemName>nameCodeSystName</ns16:codeSystemName>
    <ns16:codeSystemVersion>1.0</ns16:codeSystemVersion>
    <ns16:displayName>nameCode</ns16:displayName>
    <ns16:originalText>nameCode</ns16:originalText>
  </ns16:nameType>
  <ns16:secondNameOrInitials>C</ns16:secondNameOrInitials>
  <ns16:fullName>CMS Given Name. C. Family Name - na</ns16:fullName>
</ns16:secondWitnessName>
<ns16:secondWitnessPhone>
  <ns16:areaCode>410</ns16:areaCode>
  <ns16:countryCode>1</ns16:countryCode>
  <ns16:extension>1234</ns16:extension>
  <ns16:localNumber>567-8901</ns16:localNumber>
  <ns16:phoneNumberType>
    <ns16:code>phoneCodeSyst</ns16:code>
    <ns16:codeSystem>phoneCodeSyst</ns16:codeSystem>
    <ns16:codeSystemName>phoneCodeSystName</ns16:codeSystemName>
    <ns16:codeSystemVersion>1.0</ns16:codeSystemVersion>
    <ns16:displayName>phoneCode</ns16:displayName>
    <ns16:originalText>phoneCode</ns16:originalText>
  </ns16:phoneNumberType>
</ns16:secondWitnessPhone>
<ns16:SSN>111-22-3333</ns16:SSN>
<ns16:witnessAddress>
  <ns16:addressType>
    <ns16:code>AddrCodeSyst</ns16:code>
    <ns16:codeSystem>AddrCodeSyst</ns16:codeSystem>
    <ns16:codeSystemName>AddrCodeSystName</ns16:codeSystemName>
    <ns16:codeSystemVersion>1.0</ns16:codeSystemVersion>
    <ns16:displayName>AddrCode</ns16:displayName>
    <ns16:originalText>AddrCode</ns16:originalText>
  </ns16:addressType>
  <ns16:city>Baltimore</ns16:city>
  <ns16:country>USA</ns16:country>
  <ns16:state>MD</ns16:state>
  <ns16:streetAddress>7100 Securiry blvd</ns16:streetAddress>
  <ns16:zipCode>21244</ns16:zipCode>
</ns16:witnessAddress>
<ns16:witnessName>

```

```

<ns16:familyName>CMS Family Name - na</ns16:familyName>
<ns16:givenName>CMS Given Name - na</ns16:givenName>
<ns16:nameType>
  <ns16:code>nameCodeSyst</ns16:code>
  <ns16:codeSystem>nameCodeSyst</ns16:codeSystem>
  <ns16:codeSystemName>nameCodeSystName</ns16:codeSystemName>
  <ns16:codeSystemVersion>1.0</ns16:codeSystemVersion>
  <ns16:displayName>nameCode</ns16:displayName>
  <ns16:originalText>nameCode</ns16:originalText>
</ns16:nameType>
<ns16:secondNameOrInitials>C</ns16:secondNameOrInitials>
<ns16:fullName>CMS Given Name. C. Family Name - na</ns16:fullName>
</ns16:witnessName>
<ns16:witnessPhone>
  <ns16:areaCode>410</ns16:areaCode>
  <ns16:countryCode>1</ns16:countryCode>
  <ns16:extension>1234</ns16:extension>
  <ns16:localNumber>567-8901</ns16:localNumber>
  <ns16:phoneNumberType>
    <ns16:code>phoneCodeSyst</ns16:code>
    <ns16:codeSystem>phoneCodeSyst</ns16:codeSystem>
    <ns16:codeSystemName>phoneCodeSystName</ns16:codeSystemName>
    <ns16:codeSystemVersion>1.0</ns16:codeSystemVersion>
    <ns16:displayName>phoneCode</ns16:displayName>
    <ns16:originalText>phoneCode</ns16:originalText>
  </ns16:phoneNumberType>
</ns16:witnessPhone>
<ns16:userInfo>
  <ns16:personName>
    <ns16:familyName>CMS Family Name - na</ns16:familyName>
    <ns16:givenName>CMS Given Name - na</ns16:givenName>
    <ns16:nameType>
      <ns16:code>nameCodeSyst</ns16:code>
      <ns16:codeSystem>nameCodeSyst</ns16:codeSystem>
      <ns16:codeSystemName>nameCodeSystName</ns16:codeSystemName>
      <ns16:codeSystemVersion>1.0</ns16:codeSystemVersion>
      <ns16:displayName>nameCode</ns16:displayName>
      <ns16:originalText>nameCode</ns16:originalText>
    </ns16:nameType>
    <ns16:secondNameOrInitials>C</ns16:secondNameOrInitials>
    <ns16:fullName>CMS User Given Name. C. Family Name - na</ns16:fullName>
  </ns16:personName>
  <ns16:userName>abcd</ns16:userName>
  <ns16:org>
    <ns16:description>QSSI esMD Dev Gateway in Columbia, MD</ns16:description>
    <ns16:homeCommunityId>123.456.657.123</ns16:homeCommunityId>
    <ns16:name>QSSI esMD Local Dev Gateway</ns16:name>
  </ns16:org>
  <ns16:roleCoded>
    <ns16:code>2.16.840.1.113883.6.96</ns16:code>
    <ns16:codeSystem>2.16.840.1.113883.6.96</ns16:codeSystem>
    <ns16:codeSystemName>SNOMED_CT</ns16:codeSystemName>
    <ns16:codeSystemVersion>1.0</ns16:codeSystemVersion>
    <ns16:displayName>Claim Processing</ns16:displayName>
    <ns16:originalText>
  </ns16:roleCoded>
</ns16:userInfo>
<ns16:authorized>true</ns16:authorized>
<ns16:purposeOfDisclosureCoded>
  <ns16:code>2.16.840.1.113883.3.18.7.1</ns16:code>
  <ns16:codeSystem>2.16.840.1.113883.3.18.7.1</ns16:codeSystem>
  <ns16:codeSystemName>nhin-purpose</ns16:codeSystemName>
  <ns16:codeSystemVersion>1.0</ns16:codeSystemVersion>
  <ns16:displayName>Use or disclosure of Psychotherapy Notes</ns16:displayName>
  <ns16:originalText>Use or disclosure of Psychotherapy Notes</ns16:originalText>
</ns16:purposeOfDisclosureCoded>
<ns16:samlAuthnStatement>
  <ns16:authInstant>2009-04-16T13:15:39Z</ns16:authInstant>
  
```

```

<ns16:sessionIndex>987</ns16:sessionIndex>
<ns16:authContextClassRef>urn:oasis:names:tc:SAML:2.0:ac:classes:X509</ns16:authContextClassRef>
<ns16:subjectLocalityAddress>158.147.185.168</ns16:subjectLocalityAddress>
<ns16:subjectLocalityDNSName>esmdg.cms.cmstest</ns16:subjectLocalityDNSName>
</ns16:samlAuthnStatement>
<ns16:samlAuthzDecisionStatement>
  <ns16:decision>Permit</ns16:decision>
  <ns16:resource>https://158.147.185.168:8181/SamlReceiveService/SamlProcessWS</ns16:resource>
  <ns16:action>TestSaml</ns16:action>
  <ns16:evidence>
    <ns16:assertion>
      <ns16:id>40df7c0a-ff3e-4b26-baeb-f2910f6d05a9testmsgid652012</ns16:id>
      <ns16:issueInstant>2009-04-16T13:10:39.093Z</ns16:issueInstant>
      <ns16:version>2.0</ns16:version>
      <ns16:issuer>CN=SAML
        User,OU=Harris,O=HITS,L=Melbourne,ST=FL,C=US</ns16:issuer>
      <ns16:issuerFormat>urn:oasis:names:tc:SAML:1.1:nameid-format:X509SubjectName</ns16:issuerFormat>
      <ns16:conditions>
        <ns16:notBefore>2009-04-16T13:10:39.093Z</ns16:notBefore>
        <ns16:notOnOrAfter>2009-12-31T12:00:00.000Z</ns16:notOnOrAfter>
      </ns16:conditions>
      <ns16:accessConsentPolicy>urn:oid:2.16.840.1.113883.13.34.110.3</ns16:accessConsentPolicy>
      <ns16:instanceAccessConsentPolicy>urn:oid:2.16.840.1.113883.13.34.110.3</ns16:instanceAccessConsentPolicy>
    </ns16:assertion>
  </ns16:evidence>
</ns16:samlAuthzDecisionStatement>
<ns16:messageId>uid:4e0903af-4145-42b1-a06b-45381786bf1c</ns16:messageId>
</ns17:assertion>
<ns17:nhinTargetCommunities>
  <ns16:nhinTargetCommunity>
    <ns16:homeCommunity>
      <ns16:description>CMS esMD Gateway</ns16:description>
      <ns16:homeCommunityId>123.456.657.130</ns16:homeCommunityId>
      <ns16:name>CMS esMD Gateway</ns16:name>
    </ns16:homeCommunity>
  </ns16:nhinTargetCommunity>
</ns17:nhinTargetCommunities>
<ns17:RegistryResponse requestId="esMD-PMD PA Review Results Response"
  status="urn:oasis:names:tc:ebxml-regrep:ResponseStatusType:Success">
  <ns6:ResponseSlotList>
    <ns5:Slot name="esMDTransactionId">
      <ns5:ValueList>
        <ns5:Value>12812678</ns5:Value>
      </ns5:ValueList>
    </ns5:Slot>
    <ns5:Slot name="contentTypeCode">
      <ns5:ValueList>
        <ns5:Value>8</ns5:Value>
      </ns5:ValueList>
    </ns5:Slot>
    <ns5:Slot name="uniqueTrackingNumber">
      <ns5:ValueList>
        <ns5:Value>R4567</ns5:Value>
      </ns5:ValueList>
    </ns5:Slot>
    <ns5:Slot name="PMDDecisionIndicator">
      <ns5:ValueList>
        <ns5:Value>A</ns5:Value>
      </ns5:ValueList>
    </ns5:Slot>
  </ns6:ResponseSlotList>
</ns17:RegistryResponse>
</ns17:RespondingGateway_ProvideAndRegisterDocumentSetResponseRequest>
</S:Body>
</S:Envelope>

```

### 10.6.5.2 Non-Affirmed PMD PA Review Results Response

An excerpt of a non-affirmed outbound PMD PA review results response is shown below:

```
<S:Envelope xmlns:S="http://www.w3.org/2003/05/soap-envelope">
  <S:Body>
    <ns17:RespondingGateway_ProvideAndRegisterDocumentSetResponseRequest
      xmlns:ns2="http://docs.oasis-open.org/wsrf/bf-2"
      xmlns:ns3="http://www.w3.org/2005/08/addressing"
      xmlns:ns4="http://docs.oasis-open.org/wsn/b-2"
      xmlns:ns5="urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0"
      xmlns:ns6="urn:oasis:names:tc:ebxml-regrep:xsd:rs:3.0"
      xmlns:ns7="http://www.hhs.gov/healthit/nhin"
      xmlns:ns8="urn:oasis:names:tc:ebxml-regrep:xsd:query:3.0"
      xmlns:ns9="urn:oasis:names:tc:ebxml-regrep:xsd:lcm:3.0"
      xmlns:ns10="http://docs.oasis-open.org/wsn/t-1"
      xmlns:ns11="http://www.hhs.gov/healthit/nhin/cdc"
      xmlns:ns12="urn:gov:hhs:fha:nhinc:common:subscriptionb2overrideforcde"
      xmlns:ns13="urn:oasis:names:tc:emergency:EDXL:DE:1.0"
      xmlns:ns14="urn:ihe:iti:xds-b:2007"
      xmlns:ns15="urn:gov:hhs:fha:nhinc:common:subscriptionb2overridefordocuments"
      xmlns:ns16="urn:gov:hhs:fha:nhinc:common:nhinccommon"
      xmlns:ns17="urn:gov:hhs:fha:nhinc:common:nhinccommonentity"
      xmlns:ns18="http://nhinc.services.com/schema/auditmessage"
      xmlns:ns19="http://schemas.xmlsoap.org/ws/2004/08/addressing"
      xmlns:ns20="urn:gov:hhs:fha:nhinc:common:subscription">
      <ns17:assertion>
        .
        .
        .
        .
        <ns16:samlAuthzDecisionStatement>
          <ns16:decision>Permit</ns16:decision>
          <ns16:resource>https://158.147.185.168:8181/SamlReceiveService/SamlProcessWS</ns16:resource>
          <ns16:action>TestSaml</ns16:action>
          <ns16:evidence>
            <ns16:assertion>
              <ns16:id>40df7c0a-ff3e-4b26-baeb-f2910f6d05a9restmsgid652012</ns16:id>
              <ns16:issueInstant>2009-04-16T13:10:39.093Z</ns16:issueInstant>
              <ns16:version>2.0</ns16:version>
              <ns16:issuer>CN=SAML
                User,OU=Harris,O=HITS,L=Melbourne,ST=FL,C=US</ns16:issuer>
              <ns16:issuerFormat>urn:oasis:names:tc:SAML:1.1:nameid-format:X509SubjectName</ns16:issuerFormat>
              <ns16:conditions>
                <ns16:notBefore>2009-04-16T13:10:39.093Z</ns16:notBefore>
                <ns16:notOnOrAfter>2009-12-31T12:00:00.000Z</ns16:notOnOrAfter>
              </ns16:conditions>
              <ns16:accessConsentPolicy>urn:oid:2.16.840.1.113883.13.34.110.3</ns16:accessConsentPolicy>
              <ns16:instanceAccessConsentPolicy>urn:oid:2.16.840.1.113883.13.34.110.3</ns16:instanceAccessConsentPolicy>
            </ns16:assertion>
          </ns16:evidence>
        </ns16:samlAuthzDecisionStatement>
        <ns16:messageId>uuid:4e0903af-4145-42b1-a06b-45381786bf1c</ns16:messageId>
      </ns17:assertion>
    </ns17:nhinTargetCommunities>
    <ns16:nhinTargetCommunity>
      <ns16:homeCommunity>
        <ns16:description>CMS esMD Gateway</ns16:description>
        <ns16:homeCommunityId>123.456.657.130</ns16:homeCommunityId>
        <ns16:name>CMS esMD Gateway</ns16:name>
      </ns16:homeCommunity>
    </ns16:nhinTargetCommunity>
  </ns17:nhinTargetCommunities>
  <ns17:RegistryResponse requestId="esMD-PMD PA Review Results Response"
    status="urn:oasis:names:tc:ebxml-regrep:ResponseStatusType:Success">
    <ns6:ResponseSlotList>
```

```

<ns5:Slot name="esMDTransactionId">
  <ns5:ValueList>
    <ns5:Value>12345678</ns5:Value>
  </ns5:ValueList>
</ns5:Slot>
<ns5:Slot name="contentTypeCode">
  <ns5:ValueList>
    <ns5:Value>8</ns5:Value>
  </ns5:ValueList>
</ns5:Slot>
<ns5:Slot name="uniqueTrackingNumber">
  <ns5:ValueList>
    <ns5:Value>Y2752</ns5:Value>
  </ns5:ValueList>
</ns5:Slot>
<ns5:Slot name="PMDDecisionIndicator">
  <ns5:ValueList>
    <ns5:Value>N</ns5:Value>
  </ns5:ValueList>
</ns5:Slot>
<ns5:Slot name="PMDReasonIdentifierDtls">
  <ns5:ValueList>
    <ns5:Value>PMD2Z</ns5:Value>
  </ns5:ValueList>
</ns5:Slot>
<ns5:Slot name="PMDReasonIdentifierDtls">
  <ns5:ValueList>
    <ns5:Value>PMD4B</ns5:Value>
  </ns5:ValueList>
</ns5:Slot>
<ns5:Slot name="PMDReasonIdentifierDtls">
  <ns5:ValueList>
    <ns5:Value>PMD2A</ns5:Value>
  </ns5:ValueList>
</ns5:Slot>
<ns5:Slot name="PMDReasonIdentifierDtls">
  <ns5:ValueList>
    <ns5:Value>PMD3A</ns5:Value>
  </ns5:ValueList>
</ns5:Slot>
<ns5:Slot name="PMDReasonIdentifierDtls">
  <ns5:ValueList>
    <ns5:Value>PMD4A</ns5:Value>
  </ns5:ValueList>
</ns5:Slot>
</ns6:ResponseSlotList>
</ns17:RegistryResponse>
</ns17:RespondingGateway_ProvideAndRegisterDocumentSetResponseRequest>
</S:Body>
</S:Envelope>

```

### 10.6.5.3 Rejected PMD PA Review Results Response

An excerpt of a rejected outbound PMD PA review results response is shown below:

```
<S:Envelope xmlns:S="http://www.w3.org/2003/05/soap-envelope">
  <S:Body>
    <ns17:RespondingGateway_ProvideAndRegisterDocumentSetResponseRequest
      xmlns:ns2="http://docs.oasis-open.org/wsrf/bf-2"
      xmlns:ns3="http://www.w3.org/2005/08/addressing"
      xmlns:ns4="http://docs.oasis-open.org/wsn/b-2"
      xmlns:ns5="urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0"
      xmlns:ns6="urn:oasis:names:tc:ebxml-regrep:xsd:rs:3.0"
      xmlns:ns7="http://www.hhs.gov/healthit/nhin"
      xmlns:ns8="urn:oasis:names:tc:ebxml-regrep:xsd:query:3.0"
      xmlns:ns9="urn:oasis:names:tc:ebxml-regrep:xsd:lcm:3.0"
      xmlns:ns10="http://docs.oasis-open.org/wsn/t-1"
      xmlns:ns11="http://www.hhs.gov/healthit/nhin/cdc"
      xmlns:ns12="urn:gov:hhs:fha:nhinc:common:subscriptionb2overrideforcde"
      xmlns:ns13="urn:oasis:names:tc:emergency:EDXL:DE:1.0"
      xmlns:ns14="urn:ihe:iti:xds-b:2007"
      xmlns:ns15="urn:gov:hhs:fha:nhinc:common:subscriptionb2overridefordocuments"
      xmlns:ns16="urn:gov:hhs:fha:nhinc:common:nhinccommon"
      xmlns:ns17="urn:gov:hhs:fha:nhinc:common:nhinccommonentity"
      xmlns:ns18="http://nhinc.services.com/schema/auditmessage"
      xmlns:ns19="http://schemas.xmlsoap.org/ws/2004/08/addressing"
      xmlns:ns20="urn:gov:hhs:fha:nhinc:common:subscription">
      <ns17:assertion>
        <ns16:address>
          <ns16:addressType>
            <ns16:code>AddrCodeSyst</ns16:code>
            <ns16:codeSystem>AddrCodeSyst</ns16:codeSystem>
            <ns16:codeSystemName>AddrCodeSystName</ns16:codeSystemName>
            <ns16:codeSystemVersion>1.0</ns16:codeSystemVersion>
            <ns16:displayName>AddrCode</ns16:displayName>
            <ns16:originalText>AddrCode</ns16:originalText>
          </ns16:addressType>
          <ns16:city>Baltimore</ns16:city>
          <ns16:country>USA</ns16:country>
          <ns16:state>MD</ns16:state>
          <ns16:streetAddress>7100 Securirty blvd</ns16:streetAddress>
          <ns16:zipCode>21244</ns16:zipCode>
        </ns16:address>
        <ns16:dateOfBirth>03/10/2011 05:21:00</ns16:dateOfBirth>
        <ns16:explanationNonClaimantSignature>Electronic</ns16:explanationNonClaimantSignature>
        <ns16:haveSecondWitnessSignature>false</ns16:haveSecondWitnessSignature>
        <ns16:haveSignature>false</ns16:haveSignature>
        <ns16:haveWitnessSignature>false</ns16:haveWitnessSignature>
        <ns16:homeCommunity>
          <ns16:description>QSSI esMD Dev Gateway in Columbia, MD</ns16:description>
          <ns16:homeCommunityId>123.456.657.123</ns16:homeCommunityId>
          <ns16:name>QSSI esMD Local Dev Gateway</ns16:name>
        </ns16:homeCommunity>
        <ns16:personName>
          <ns16:familyName>CMS Family Name - na</ns16:familyName>
          <ns16:givenName>CMS Given Name - na</ns16:givenName>
          <ns16:nameType>
            <ns16:code>nameCodeSyst</ns16:code>
            <ns16:codeSystem>nameCodeSyst</ns16:codeSystem>
            <ns16:codeSystemName>nameCodeSystName</ns16:codeSystemName>
            <ns16:codeSystemVersion>1.0</ns16:codeSystemVersion>
            <ns16:displayName>nameCode</ns16:displayName>
            <ns16:originalText>nameCode</ns16:originalText>
          </ns16:nameType>
          <ns16:secondNameOrInitials>C</ns16:secondNameOrInitials>
          <ns16:fullName>CMS Given Name. C. Family Name - na</ns16:fullName>
        </ns16:personName>
        <ns16:phoneNumber>
          <ns16:areaCode>410</ns16:areaCode>
        </ns16:phoneNumber>
      </ns17:assertion>
    </ns17:RespondingGateway_ProvideAndRegisterDocumentSetResponseRequest>
  </S:Body>
</S:Envelope>
```

```

<ns16:countryCode>1</ns16:countryCode>
<ns16:extension>1234</ns16:extension>
<ns16:localNumber>567-8901</ns16:localNumber>
<ns16:phoneNumberType>
  <ns16:code>phoneCodeSyst</ns16:code>
  <ns16:codeSystem>phoneCodeSyst</ns16:codeSystem>
  <ns16:codeSystemName>phoneCodeSystName</ns16:codeSystemName>
  <ns16:codeSystemVersion>1.0</ns16:codeSystemVersion>
  <ns16:displayName>phoneCode</ns16:displayName>
  <ns16:originalText>phoneCode</ns16:originalText>
</ns16:phoneNumberType>
</ns16:phoneNumber>
<ns16:secondWitnessAddress>
  <ns16:addressType>
    <ns16:code>AddrCodeSyst</ns16:code>
    <ns16:codeSystem>AddrCodeSyst</ns16:codeSystem>
    <ns16:codeSystemName>AddrCodeSystName</ns16:codeSystemName>
    <ns16:codeSystemVersion>1.0</ns16:codeSystemVersion>
    <ns16:displayName>AddrCode</ns16:displayName>
    <ns16:originalText>AddrCode</ns16:originalText>
  </ns16:addressType>
  <ns16:city>Baltimore</ns16:city>
  <ns16:country>USA</ns16:country>
  <ns16:state>MD</ns16:state>
  <ns16:streetAddress>7100 Securiry blvd</ns16:streetAddress>
  <ns16:zipCode>21244</ns16:zipCode>
</ns16:secondWitnessAddress>
<ns16:secondWitnessName>
  <ns16:familyName>CMS Family Name - na</ns16:familyName>
  <ns16:givenName>CMS Given Name - na</ns16:givenName>
  <ns16:nameType>
    <ns16:code>nameCodeSyst</ns16:code>
    <ns16:codeSystem>nameCodeSyst</ns16:codeSystem>
    <ns16:codeSystemName>nameCodeSystName</ns16:codeSystemName>
    <ns16:codeSystemVersion>1.0</ns16:codeSystemVersion>
    <ns16:displayName>nameCode</ns16:displayName>
    <ns16:originalText>nameCode</ns16:originalText>
  </ns16:nameType>
  <ns16:secondNameOrInitials>C</ns16:secondNameOrInitials>
  <ns16:fullName>CMS Given Name. C. Family Name - na</ns16:fullName>
</ns16:secondWitnessName>
<ns16:secondWitnessPhone>
  <ns16:areaCode>410</ns16:areaCode>
  <ns16:countryCode>1</ns16:countryCode>
  <ns16:extension>1234</ns16:extension>
  <ns16:localNumber>567-8901</ns16:localNumber>
  <ns16:phoneNumberType>
    <ns16:code>phoneCodeSyst</ns16:code>
    <ns16:codeSystem>phoneCodeSyst</ns16:codeSystem>
    <ns16:codeSystemName>phoneCodeSystName</ns16:codeSystemName>
    <ns16:codeSystemVersion>1.0</ns16:codeSystemVersion>
    <ns16:displayName>phoneCode</ns16:displayName>
    <ns16:originalText>phoneCode</ns16:originalText>
  </ns16:phoneNumberType>
</ns16:secondWitnessPhone>
<ns16:SSN>111-22-3333</ns16:SSN>
<ns16:witnessAddress>
  <ns16:addressType>
    <ns16:code>AddrCodeSyst</ns16:code>
    <ns16:codeSystem>AddrCodeSyst</ns16:codeSystem>
    <ns16:codeSystemName>AddrCodeSystName</ns16:codeSystemName>
    <ns16:codeSystemVersion>1.0</ns16:codeSystemVersion>
    <ns16:displayName>AddrCode</ns16:displayName>
    <ns16:originalText>AddrCode</ns16:originalText>
  </ns16:addressType>
  <ns16:city>Baltimore</ns16:city>
  <ns16:country>USA</ns16:country>
  <ns16:state>MD</ns16:state>

```

```

<ns16:streetAddress>7100 Securty blvd</ns16:streetAddress>
<ns16:zipCode>21244</ns16:zipCode>
</ns16:witnessAddress>
<ns16:witnessName>
  <ns16:familyName>CMS Family Name - na</ns16:familyName>
  <ns16:givenName>CMS Given Name - na</ns16:givenName>
  <ns16:nameType>
    <ns16:code>nameCodeSyst</ns16:code>
    <ns16:codeSystem>nameCodeSyst</ns16:codeSystem>
    <ns16:codeSystemName>nameCodeSystName</ns16:codeSystemName>
    <ns16:codeSystemVersion>1.0</ns16:codeSystemVersion>
    <ns16:displayName>nameCode</ns16:displayName>
    <ns16:originalText>nameCode</ns16:originalText>
  </ns16:nameType>
  <ns16:secondNameOrInitials>C</ns16:secondNameOrInitials>
  <ns16:fullName>CMS Given Name. C. Family Name - na</ns16:fullName>
</ns16:witnessName>
<ns16:witnessPhone>
  <ns16:areaCode>410</ns16:areaCode>
  <ns16:countryCode>1</ns16:countryCode>
  <ns16:extension>1234</ns16:extension>
  <ns16:localNumber>567-8901</ns16:localNumber>
  <ns16:phoneNumberType>
    <ns16:code>phoneCodeSyst</ns16:code>
    <ns16:codeSystem>phoneCodeSyst</ns16:codeSystem>
    <ns16:codeSystemName>phoneCodeSystName</ns16:codeSystemName>
    <ns16:codeSystemVersion>1.0</ns16:codeSystemVersion>
    <ns16:displayName>phoneCode</ns16:displayName>
    <ns16:originalText>phoneCode</ns16:originalText>
  </ns16:phoneNumberType>
</ns16:witnessPhone>
<ns16:userInfo>
  <ns16:personName>
    <ns16:familyName>CMS Faimily Name - na</ns16:familyName>
    <ns16:givenName>CMS Given Name - na</ns16:givenName>
    <ns16:nameType>
      <ns16:code>nameCodeSyst</ns16:code>
      <ns16:codeSystem>nameCodeSyst</ns16:codeSystem>
      <ns16:codeSystemName>nameCodeSystName</ns16:codeSystemName>
      <ns16:codeSystemVersion>1.0</ns16:codeSystemVersion>
      <ns16:displayName>nameCode</ns16:displayName>
      <ns16:originalText>nameCode</ns16:originalText>
    </ns16:nameType>
    <ns16:secondNameOrInitials>C</ns16:secondNameOrInitials>
    <ns16:fullName>CMS User Given Name. C. Family Name - na</ns16:fullName>
  </ns16:personName>
  <ns16:userName>abcd</ns16:userName>
</ns16:org>
  <ns16:description>QSSI esMD Dev Gateway in Columbia, MD</ns16:description>
  <ns16:homeCommunityId>123.456.657.123</ns16:homeCommunityId>
  <ns16:name>QSSI esMD Local Dev Gateway</ns16:name>
</ns16:org>
  <ns16:roleCoded>
    <ns16:code>2.16.840.1.113883.6.96</ns16:code>
    <ns16:codeSystem>2.16.840.1.113883.6.96</ns16:codeSystem>
    <ns16:codeSystemName>SNOMED_CT</ns16:codeSystemName>
    <ns16:codeSystemVersion>1.0</ns16:codeSystemVersion>
    <ns16:displayName>Claim Processing</ns16:displayName>
    <ns16:originalText>
  </ns16:roleCoded>
</ns16:userInfo>
<ns16:authorized>true</ns16:authorized>
<ns16:purposeOfDisclosureCoded>
  <ns16:code>2.16.840.1.113883.3.18.7.1</ns16:code>
  <ns16:codeSystem>2.16.840.1.113883.3.18.7.1</ns16:codeSystem>
  <ns16:codeSystemName>nhin-purpose</ns16:codeSystemName>
  <ns16:codeSystemVersion>1.0</ns16:codeSystemVersion>
  <ns16:displayName>Use or disclosure of Psychotherapy Notes</ns16:displayName>

```

```

<ns16:originalText>Use or disclosure of Psychotherapy Notes</ns16:originalText>
</ns16:purposeOfDisclosureCoded>
<ns16:samlAuthnStatement>
  <ns16:authInstant>2009-04-16T13:15:39Z</ns16:authInstant>
  <ns16:sessionIndex>987</ns16:sessionIndex>
  <ns16:authContextClassRef>urn:oasis:names:tc:SAML:2.0:ac:classes:X509</ns16:authContextClassRef>
  <ns16:subjectLocalityAddress>158.147.185.168</ns16:subjectLocalityAddress>
  <ns16:subjectLocalityDNSName>esmdg.cms.cmstest</ns16:subjectLocalityDNSName>
</ns16:samlAuthnStatement>
<ns16:samlAuthzDecisionStatement>
  <ns16:decision>Permit</ns16:decision>
  <ns16:resource>https://158.147.185.168:8181/SamlReceiveService/SamlProcessWS</ns16:resource>
  <ns16:action>TestSaml</ns16:action>
  <ns16:evidence>
    <ns16:assertion>
      <ns16:id>40df7c0a-ff3e-4b26-baeb-f2910f6d05a9testmsgid652012</ns16:id>
      <ns16:issueInstant>2009-04-16T13:10:39.093Z</ns16:issueInstant>
      <ns16:version>2.0</ns16:version>
      <ns16:issuer>CN=SAML
        User,OU=Harris,O=HITS,L=Melbourne,ST=FL,C=US</ns16:issuer>
      <ns16:issuerFormat>urn:oasis:names:tc:SAML:1.1:nameid-format:X509SubjectName</ns16:issuerFormat>
      <ns16:conditions>
        <ns16:notBefore>2009-04-16T13:10:39.093Z</ns16:notBefore>
        <ns16:notOnOrAfter>2009-12-31T12:00:00.000Z</ns16:notOnOrAfter>
      </ns16:conditions>
      <ns16:accessConsentPolicy>urn:oid:2.16.840.1.113883.13.34.110.3</ns16:accessConsentPolicy>
      <ns16:instanceAccessConsentPolicy>urn:oid:2.16.840.1.113883.13.34.110.3</ns16:instanceAccessConsentPolicy>
    </ns16:assertion>
  </ns16:evidence>
</ns16:samlAuthzDecisionStatement>
<ns16:messageId>uuid:4e0903af-4145-42b1-a06b-45381786bf1c</ns16:messageId>
</ns17:assertion>
<ns17:nhinTargetCommunities>
  <ns16:nhinTargetCommunity>
    <ns16:homeCommunity>
      <ns16:description>CMS esMD Gateway</ns16:description>
      <ns16:homeCommunityId>123.456.657.130</ns16:homeCommunityId>
      <ns16:name>CMS esMD Gateway</ns16:name>
    </ns16:homeCommunity>
  </ns16:nhinTargetCommunity>
</ns17:nhinTargetCommunities>
<ns17:RegistryResponse requestId="esMD-PMD PA Review Results Response"
  status="urn:oasis:names:tc:ebxml-regrep:ResponseStatusType:Success">
  <ns6:ResponseSlotList>
    <ns5:Slot name="esMDTransactionId">
      <ns5:ValueList>
        <ns5:Value>12345678</ns5:Value>
      </ns5:ValueList>
    </ns5:Slot>
    <ns5:Slot name="contentTypeCode">
      <ns5:ValueList>
        <ns5:Value>8</ns5:Value>
      </ns5:ValueList>
    </ns5:Slot>
    <ns5:Slot name="PMDDecisionIndicator">
      <ns5:ValueList>
        <ns5:Value>R</ns5:Value>
      </ns5:ValueList>
    </ns5:Slot>
    <ns5:Slot name="PMDReasonIdentifierDtls">
      <ns5:ValueList>
        <ns5:Value>PMD2Z</ns5:Value>
      </ns5:ValueList>
    </ns5:Slot>
    <ns5:Slot name="PMDReasonIdentifierDtls">
      <ns5:ValueList>
        <ns5:Value>PMD3A</ns5:Value>
      </ns5:ValueList>
    </ns5:Slot>
  </ns6:ResponseSlotList>
</ns17:RegistryResponse>

```

```

</ns5:Slot>
<ns5:Slot name="PMDReasonIdentifierDtls">
  <ns5:ValueList>
    <ns5:Value>PMD2A</ns5:Value>
  </ns5:ValueList>
</ns5:Slot>
<ns5:Slot name="PMDReasonIdentifierDtls">
  <ns5:ValueList>
    <ns5:Value>PMD5A</ns5:Value>
  </ns5:ValueList>
</ns5:Slot>
<ns5:Slot name="PMDReasonIdentifierDtls">
  <ns5:ValueList>
    <ns5:Value>PMD4A</ns5:Value>
  </ns5:ValueList>
</ns5:Slot>
</ns6:ResponseSlotList>
</ns17:RegistryResponse>
</ns17:RespondingGateway_ProvideAndRegisterDocumentSetResponseRequest>
</S:Body>
</S:Envelope>

```

### 10.6.6 Retry Functionality for Sending PMD PA Review Results Response to the HIHs

After sending the PMD PA review results response to the HIH Gateway, the esMD Gateway shall expect an HTTP 200 acknowledgement back from the HIH Gateway as a receipt of the message. If the esMD Gateway does not receive an HTTP 200 acknowledgement back, it will retry sending the PMD PA review results response to the HIH Gateway at frequent intervals. This shall be continued until the esMD Gateway receives an HTTP 200 back from the HIH Gateway.

## 11 RELEASE NOTIFICATION DETAILS

This table describes the various components and the number of participating organizations for esMD Phase 1 (Releases 1.1- 2.1).

**Table 24: Release Notification Details** Table 24: Release Notification Details

	Sept. 2011	Nov. 2011	August 2012	April 2013	June 2013	Dec. 2013
CONNECT Release	3.1	3.1	3.1	3.1	3.1	4.2
Application Server	GlassFish	GlassFish	GlassFish Begin ST&E for WAS	WAS 7.0	WAS 7.0	WAS 7.0
Connect Modules	XDR Document Submission	XDR Document Submission	XDR Document Submission	XDR Document Submission	XDR Document Submission	XDR Document Submission
File Size (Allegedly)	Up to 19mb	Up to 19mb	Up to 19mb	Up to 19mb	Up to 19mb	Up to 19mb
Inbound Payload: Provider to review contractor	HITSP C62 w/PDF	HITSP C62 w/PDF	HITSP C62 w/PDF	HITSP C62 w/PDF	HITSP C62 w/PDF	HITSP C62 w/PDF
Inbound Use Cases (Provider to review contractor)	Responses to ADR	Responses to ADR	Responses to ADR	Responses to ADR PMD PA	Responses to ADR PMD PA	Responses to ADR PMD PA

	Sept. 2011	Nov. 2011	August 2012	April 2013	June 2013	Dec. 2013
Outbound Use Cases (review contractor to Provider)	None	None	None	None	PMD PA Review Results Response	PMD PA Review Results Response
Reporting	None	WebApp-Reporting/Admin (Internal)				
Acknowledgment and Notification	HTTP 200 Ack.  Conformance/Validation- 1 <sup>st</sup> Notification  Review Contractor Pickup- 2 <sup>nd</sup> Notification	HTTP 200 Ack.  Conformance/Validation- 1 <sup>st</sup> Notification  Review Contractor Pickup- 2 <sup>nd</sup> Notification	HTTP 200 Ack.  Conformance/Validation- 1 <sup>st</sup> Notification  Review Contractor Pickup- 2 <sup>nd</sup> Notification	HTTP 200 Ack.  Conformance/Validation- 1 <sup>st</sup> Notification  Review Contractor Pickup- 2 <sup>nd</sup> Notification	HTTP 200 Ack.  Conformance/Validation- 1 <sup>st</sup> Notification  Review Contractor Pickup- 2 <sup>nd</sup> Notification	HTTP 200 Ack.  Conformance/Validation- 1 <sup>st</sup> Notification  Review Contractor Pickup- 2 <sup>nd</sup> Notification
Review Contractors	2 RACs, 9 MACs, CERT, PERM	+ 3 DME MACs + 2MACS	+ 2 ZPICS, 1 RAC, more MACs	+ more review contractors	+ more review contractors	+ more review contractors
HIH	6 HIHs	+ 5 HIHs	+ 20 HIHs	+ more HIHs	+ more HIHs	+ more HIHs
eHealth Exchange On-boarding Process	CMS not on eHealth Exchange HIHs not on eHealth Exchange	CMS not on eHealth Exchange HIHs not on eHealth Exchange	CMS not on eHealth Exchange HIHs not on eHealth Exchange	CMS not on eHealth Exchange HIHs not on eHealth Exchange	CMS not on eHealth Exchange HIHs not on eHealth Exchange	CMS not on eHealth Exchange HIHs not on eHealth Exchange

## 12 GLOSSARY

Term	Definition
Acknowledgement (ACK)	Message (such as one used in 'handshaking' process between two systems) that indicates the status of communications received. It is commonly written as ACK.
Additional Documentation Request (ADR)	Official letters sent to Providers from CMS Review Contractors requesting additional documentation that is needed to process claims.
Advanced Determination of Medical Coverage (ADMC)	A voluntary program that allows Suppliers and Beneficiaries to request prior approval of eligible items (e.g., wheelchairs) before delivery of the items to the beneficiary.
CONNECT	CONNECT implements a flexible, open-source gateway solution that enables healthcare entities - Federal agencies or private-sector health organizations or networks - to connect their existing health information systems to the eHealth Exchange. CONNECT is fully functional out-of-the-box, while at the same time configurable and flexible to allow organizations to customize it to meet their needs and those of their existing health information systems.
Data Use Agreement	A satisfactory assurance between the covered entity and a researcher using a limited data set that the data will only be used for specific uses and disclosures. The data use agreement is required to include the following information: to establish that the data will be used for research, public health or health care operations (further uses or disclosure are not permitted); to establish who is permitted to use or receive the limited data set; and to provide that the limited data set recipient will: (1) not use or further disclose the information other than as permitted by the data use agreement or as required by law; (2) use appropriate safeguards to prevent use or disclosure of the information other than as provided in the agreement; (3) report to the covered entity any identified use or disclosure not provided for in the agreement; (4) ensure that any agents, including a subcontractor, to whom the limited data sets are provided agree to the same restrictions and conditions that apply to the recipient; and (5) not identify the information or contact the individuals.
De-identified Data	De-identified data is data from which patient identifiers consisting of Personally Identifiable Information (PII) is removed. The business rules for de-identified data follow the HIPAA Privacy Rule including the de-identification of the specified identifiers.

Electronic Submission of Medical Documentation (esMD)	A new mechanism for submitting medical documentation via a secure internet gateway connecting Providers to the Centers for Medicare & Medicaid Services (CMS). In its second phase, esMD will allow Medicare Review Contractors to electronically submit claim related Additional Document Request (ADR) letters, and other use case requests, to Providers when their claims are selected for review.
Health Information Handler (HIH)	A Health Information Handler (HIH) is defined as an organization that oversees and governs the exchange of health-related claim reviewer information from Provider to CMS esMD Gateway according to nationally recognized standards.
Health Information Technology Standards Panel (HITSP)	HITSP is a volunteer-driven, consensus-driven organization that is sponsored through a contract from the Department of Health and Human Services (HHS). HITSP harmonizes and recommends the technical standards that are crucial to assure the interoperability of electronic health records.
HTTPS	A set of rules for an speedy retrieval and transmission of electronic documents written in HTML over a secure connection. HTTPS addresses differentiated from HTTP because they encrypt and decrypt user pages to prevent unauthorized access to sensitive data. Online credit card processing and banking websites use HTTPS addresses to ensure privacy and provide secure processing for users.
Interoperability	Interoperability is the ability of health information systems to work together, within and across organizational boundaries, in order to advance the effective delivery of healthcare for individuals and communities.
Interface	A well-defined boundary where direct contact between two different environments, systems, etc., occurs, and where information is exchanged.
eHealth Exchange	The eHealth Exchange is a set of standards, protocols, legal agreements, and specifications that a consortium of health information organizations have agreed are necessary for secure and private exchange of health information over the internet. The eHealth Exchange is overseen by the Office of the National Coordinator for Health IT (ONC).
Performance	Accomplishment of a transaction measured against preset standards of accuracy, completeness, cost, and speed.
Privacy	An individual's interest in protecting his or her individually identifiable health information and the corresponding obligation of those persons and entities, that participate in a network for the purposes of electronic exchange of such information, to respect those interests through fair

	information practices.
Power Mobility Device (PMD) Prior Authorization (PA)	The CMS implemented a Prior Authorization process for scooters and power wheelchairs for people with Fee-For-Service Medicare who reside in seven states with high populations of fraud- and error-prone Providers (CA, IL, MI, NY, NC, FL, and TX). This demonstration will help ensure that a beneficiary's medical condition warrants their medical equipment under existing coverage guidelines. Moreover, the program will assist in preserving a Medicare beneficiary's ability to receive quality products from accredited suppliers.
Response Time	It is the interval between a user-command and the receipt of an action, result, or feedback from the system. It is expressed as the sum of (a) transmission time of the command to the system, (b) processing time at the CPU, (c) access time to obtain required data from a storage device, and (d) transmission time of the result back to the user. When applied to a system component, it is the time taken to react to a system request or a given input.
SAML	Security Assertion Markup Language used for message authentication.
Security	The physical, technological, and administrative safeguards used to protect individually identifiable health information.
SOAP	Simple Object Access Protocol is a message exchange format for web services.
TLS	<p>Transport Layer Security (TLS) and its predecessor, Secure Sockets Layer (SSL), are cryptographic protocols that "provide communications security over the Internet". TLS and SSL encrypt the segments of network connections above the Transport Layer, using symmetric cryptography for privacy and a keyed message authentication code for message reliability. TLS is an IETF standards track protocol, last updated in RFC 5246, and based on the earlier SSL specifications developed by Netscape Corporation.</p> <p>The TLS protocol allows client/server applications to communicate across a network in a way designed to prevent eavesdropping and tampering. A TLS client and server negotiate a stateful connection by using a handshaking procedure. During this handshake, the client and server agree on various parameters used to establish the connection's security.</p> <ul style="list-style-type: none"> <li>The handshake begins when a client connects to a TLS-enabled server requesting a secure connection, and presents a list of supported CipherSuites</li> </ul>

	<p>(ciphers and hash functions).</p> <ul style="list-style-type: none"> <li>• From this list, the server picks the strongest cipher and hash function that it supports and notifies the client of the decision.</li> <li>• The server sends back its identification in the form of a digital certificate. The certificate usually contains the server name, the trusted certificate authority (CA), and the server's public encryption key.</li> <li>• The client may contact the server that issued the certificate (the trusted CA as above) and confirm that the certificate is valid before proceeding.</li> <li>• In order to generate the session keys used for the secure connection, the client encrypts a random number (RN) with the server's public key (PbK), and sends the result to the server. Only the server should be able to decrypt it (with its private key (PvK)): this is the one fact that makes the keys hidden from third parties, since only the server and the client have access to this data. The client knows PbK and RN, and the server knows PvK and (after decryption of the client's message) RN. A third party is only able to know RN if PvK has been compromised.</li> <li>• From the random number, both parties generate key material for encryption and decryption.</li> <li>• This concludes the handshake and begins the secured connection, which is encrypted and decrypted with the key material until the connection closes.</li> </ul> <p>If any one of the above steps fails, the TLS handshake fails, and the connection is not created.</p>
Transaction	Event or process (such as an input message) initiated or invoked by a user or system, regarded as a single unit of work and requiring a record to be generated for processing in a database.

### 13 ACRONYMS

ACRONYM	TERM
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ADMC	Advanced Determination of Medical Coverage
ADR	Additional Documentation Request
AES	Advanced Encryption Standard
CA	Certificate Authority
CDA	Clinical Document Architecture
CCHIT	Certification Commission for Health Information Technology
CMS	Centers for Medicare & Medicaid Services
CERT	Comprehensive Error Rate Testing
EHR	Electronic Health Record
esMD	Electronic Submission of Medical Documentation
FFS	Fee-For-Service
FIPS	Federal Information Processing Standards
HIE	Health Information Exchange
HIPAA	Health Information Portability and Accountability Act
HIT	Health Information Technology
HITSP	Health Information Technology Standards Panel
HL7	Health Level 7
HIH	Health Information Handler
HTTP	Hypertext Transfer Protocol
HTTPS	Hypertext Transfer Protocol Secure
IHE	Integrating the Healthcare Enterprise
IP	Internet Protocol
MAC	Medicare Audit Contractor
MIC	Medicaid Integrity Contractor
NHIN	Nationwide Health Information Network
NIST	National Institute of Standards and Technology
NPI	National Provider Identifier
OASIS	Organization for the Advancement of Structured Information Standards
OID	Organizational Identification
ONC	Office of National Coordinator for HIT
PDF	Portable Document Format
PERM	Program Error Rate Measurement
PMD PA	Power Mobility Device Prior Authorization
RC	Review Contractor

RAC	Recovery Audit Contractor
ROI	Release of Information
RHIO	Regional Health Information Organization
SAML	Security Assertion Markup Language
SHA	Secure Hash Algorithm
SOAP	Simple Object Access Protocol
SMRC	Supplemental Medical Review/Specialty Contractor
TIFF	Tagged Image File Format
TLS	Transport Layer Security
URI	Uniform Resource Identifier
URL	Uniform Resource Locator
XDR	External Data Representation
XML	Extensible Markup Language
ZPIC	Zone Program Integrity Contractor

## 14 APPENDIX A: SOAP MESSAGE FOR INBOUND (HIH TO CMS) SUBMISSIONS

Sample SOAP Message (the values will be different based on the use case).

The message provided below is a response to ADR and is sent to MAC J9.

```
<?xml version="1.0" encoding="UTF-8"?>
<soapenv:Envelope xmlns:soapenv="http://www.w3.org/2003/05/soap-envelope"
xmlns:urn="urn:gov:hhs:fha:nhinc:common:nhinccommonentity" xmlns:urn1="urn:gov:hhs:fha:nhinc:common:nhinccommon"
xmlns:add="http://schemas.xmlsoap.org/ws/2004/08/addressing" xmlns:urn2="urn:oasis:names:tc:ebxml-regrep:xsd:lcm:3.0"
xmlns:urn3="urn:oasis:names:tc:ebxml-regrep:xsd:rs:3.0" xmlns:urn4="urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0"
xmlns:urn5="urn:ihe:iti:xds-b:2007">
  <soapenv:Header/>
  <soapenv:Body projectname="EndToEndSelfTest" testCase="XDR Async">
    <urn:RespondingGateway_ProvideAndRegisterDocumentSetRequest>
      <urn:assertion>
        <urn1:homeCommunity>
          <urn1:description>${#Project#LocalHCDescription}</urn1:description>
          <urn1:homeCommunityId>${#Project#LocalHCID}</urn1:homeCommunityId>
          <urn1:name>${#Project#LocalHCDescription}</urn1:name>
        </urn1:homeCommunity>
        <urn1:uniquePatientId>urn:oid:2.16.840.1.113883.13.34.110.1.110.9</urn1:uniquePatientId>
        <urn1:userInfo>
          <urn1:userName>1234567899</urn1:userName>
          <urn1:org>
            <urn1:description>${#Project#LocalHCDescription}</urn1:description>
            <urn1:homeCommunityId>${#Project#LocalHCID}</urn1:homeCommunityId>
            <urn1:name>${#Project#LocalHCDescription}</urn1:name>
          </urn1:org>
        </urn1:userInfo>
        <urn1:organizationId>
          <urn1:description>Description of Broker Organization between Provider and the submitting HIH CONNECT or
CONNECT Compatible Gateway</urn1:description>
          <urn1:homeCommunityId>urn:oid:1.3.6.1.4.1.101420.6.1</urn1:homeCommunityId>
          <urn1:name>Name of Broker Organization between Provider and the submitting HIH CONNECT or CONNECT
Compatible Gateway</urn1:name>
        </urn1:organizationId>
        <urn1:purposeOfDisclosureCoded>
          <urn1:code>PAYMENT</urn1:code>
          <urn1:codeSystem>2.16.840.1.113883.3.18.7.1</urn1:codeSystem>
          <urn1:codeSystemName>esMD CMS Purpose</urn1:codeSystemName>
          <urn1:codeSystemVersion>1.0</urn1:codeSystemVersion>
          <urn1:displayName>Medical Claim Documentation Review</urn1:displayName>
          <urn1:originalText>Medical Claim Documentation Review</urn1:originalText>
        </urn1:purposeOfDisclosureCoded>
        <urn1:samlAuthnStatement>
          <urn1:authInstant>2011-01-05T16:50:01.011Z</urn1:authInstant>
          <urn1:sessionIndex>987</urn1:sessionIndex>
          <urn1:authContextClassRef>urn:oasis:names:tc:SAML:2.0:ac:classes:X509</urn1:authContextClassRef>
          <urn1:subjectLocalityAddress>158.147.185.168</urn1:subjectLocalityAddress>
          <urn1:subjectLocalityDNSName>cms.hhs.gov</urn1:subjectLocalityDNSName>
        </urn1:samlAuthnStatement>
        <urn1:samlAuthzDecisionStatement>
          <urn1:decision>Permit</urn1:decision>
          <urn1:resource>https://158.147.185.168:8181/esMD/DocumentSubmission</urn1:resource>
          <urn1:action>TestSaml</urn1:action>
          <urn1:evidence>
            <urn1:assertion>
              <urn1:id>cms_esmd_hihname_09172012_VAL_ADR_1</urn1:id>
              <urn1:issueInstant>2011-01-05T16:50:01.011Z</urn1:issueInstant>
              <urn1:version>2.0</urn1:version>
              <urn1:issuerFormat>urn:oasis:names:tc:SAML:1.1:nameid-format:X509SubjectName</urn1:issuerFormat>
            </urn1:assertion>
          </urn1:evidence>
        </urn1:samlAuthzDecisionStatement>
      </urn:assertion>
    </urn:RespondingGateway_ProvideAndRegisterDocumentSetRequest>
  </soapenv:Body>
</soapenv:Envelope>
```

```

<urn1:issuer>CN=HIH SAML User,OU=QSSI,O=QSSI,L=Baltimore,ST=MD,C=US</urn1:issuer>
<urn1:conditions>
  <urn1:notBefore>2011-01-05T16:50:01.011Z</urn1:notBefore>
  <urn1:notOnOrAfter>2011-01-05T16:53:01.011Z</urn1:notOnOrAfter>
</urn1:conditions>
<urn1:accessConsentPolicy>Claim-Ref-1234 NA for esMD</urn1:accessConsentPolicy>
<urn1:instanceAccessConsentPolicy>Claim-Instance-1 NA for esMD</urn1:instanceAccessConsentPolicy>
</urn1:assertion>
</urn1:evidence>
</urn1:samlAuthzDecisionStatement>
</urn:assertion>
<urn:nhinTargetCommunities>
  <urn1:nhinTargetCommunity>
    <urn1:homeCommunity>
      <urn1:description>${Project#RemoteHCDescription}</urn1:description>
      <urn1:homeCommunityId>${Project#RemoteHCID}</urn1:homeCommunityId>
      <urn1:name>${Project#RemoteHCDescription}</urn1:name>
    </urn1:homeCommunity>
  </urn1:nhinTargetCommunity>
</urn:nhinTargetCommunities>
<urn:ProvideAndRegisterDocumentSetRequest>
  <urn2:SubmitObjectsRequest id="999" comment="esMD Claim Document Submission in response to Review Contractor
ADR Letter">
    <urn4:RegistryObjectList>
      <urn4:ExtrinsicObject id="Document01" mimeType="application/pdf" objectType="urn:uuid:7edca82f-054d-47f2-
a032-9b2a5b5186c1">
        <urn4:Classification id="cl01" classificationScheme="urn:uuid:93606bcf-9494-43ec-9b4e-a7748d1a838d"
classifiedObject="Document01" nodeRepresentation="author">
          <urn4:Slot name="authorInstitution">
            <urn4:ValueList>
              <urn4:Value>603111</urn4:Value>
            </urn4:ValueList>
          </urn4:Slot>
          <urn4:Slot name="authorPerson">
            <urn4:ValueList>
              <urn4:Value>603</urn4:Value>
            </urn4:ValueList>
          </urn4:Slot>
        </urn4:Classification>

        <urn4:Description>
          <urn4:LocalizedString value="esMD Claim Document Submission in response to Review Contractor ADR
Letter"/>
        </urn4:Description>

        <urn4:Classification id="cl03" classificationScheme="urn:uuid:f4f85eac-e6cb-4883-b524-f2705394840f"
classifiedObject="Document01" nodeRepresentation="2.16.840.1.113883.5.25">
          <urn4:Slot name="confidentialityCode">
            <urn4:ValueList>
              <urn4:Value>V</urn4:Value>
            </urn4:ValueList>
          </urn4:Slot>
          <urn4:Name>
            <urn4:LocalizedString value="Very"/>
          </urn4:Name>
        </urn4:Classification>
        <urn4:Slot name="creationTime">
          <urn4:ValueList>
            <urn4:Value>20110101165910</urn4:Value>
          </urn4:ValueList>
        </urn4:Slot>
        <urn4:Classification id="cl04" classificationScheme="urn:uuid:a09d5840-386c-46f2-b5ad-9c3699a4309d"
classifiedObject="Document01" nodeRepresentation="2.16.840.1.113883.13.34.110.1.1000.1">
          <urn4:Slot name="formatCode">
            <urn4:ValueList>
              <urn4:Value>1</urn4:Value>
            </urn4:ValueList>
          </urn4:Slot>

```

```

    <urn4:Name>
      <urn4:LocalizedString value="Scanned PDF Document in CDA C62 Construct"/>
    </urn4:Name>
  </urn4:Classification>
  <urn4:Classification id="cl06" classificationScheme="urn:uuid:ccc5598-8b07-4b77-a05e-ae952c785ead"
classifiedObject="Document01" nodeRepresentation="2.16.840.1.113883.13.34.110.1.1000.1">
    <urn4:Slot name="practiceSettingCode">
      <urn4:ValueList>
        <urn4:Value>1</urn4:Value>
      </urn4:ValueList>
    </urn4:Slot>
    <urn4:Name>
      <urn4:LocalizedString value="NA"/>
    </urn4:Name>
  </urn4:Classification>
  <urn4:Slot name="hash">
    <urn4:ValueList>
      <urn4:Value>ad18814418693512b767676006a21d8ec7291e84</urn4:Value>
    </urn4:ValueList>
  </urn4:Slot>
  <urn4:Classification id="cl05" classificationScheme="urn:uuid:f33fb8ac-18af-42cc-ae0e-ed0b0bdb91e1"
classifiedObject="Document01" nodeRepresentation="2.16.840.1.113883.13.34.110.1.1000.1">
    <urn4:Slot name="healthcareFacilityTypeCode">
      <urn4:ValueList>
        <urn4:Value>1</urn4:Value>
      </urn4:ValueList>
    </urn4:Slot>
    <urn4:Name>
      <urn4:LocalizedString value="Health Information Handler (HIH)"/>
    </urn4:Name>
  </urn4:Classification>
  <urn4:Slot name="languageCode">
    <urn4:ValueList>
      <urn4:Value>en-us</urn4:Value>
    </urn4:ValueList>
  </urn4:Slot>
  <urn4:slot name="legalAuthenticator">
    <urn4:ValueList>
      <urn4:Value>NA</urn4:Value>
    </urn4:ValueList>
  </urn4:slot>
  <urn4:ExternalIdentifier id="ei01" registryObject="Document01" identificationScheme="urn:uuid:58a6f841-87b3-
4a3e-92fd-a8ffeff98427" value="1234567890123^^^&";2.16.840.1.113883.13.34&";ISO">
    <urn4:Name>
      <urn4:LocalizedString value="XDSSubmissionSet.patientId"/>
    </urn4:Name>
  </urn4:ExternalIdentifier>
  <urn4:Classification id="cl07" classificationScheme="urn:uuid:f0306f51-975f-434e-a61c-c59651d33983"
classifiedObject="Document01" nodeRepresentation="2.16.840.1.113883.13.34.110.1.1000.1">
    <urn4:Slot name="codingScheme">
      <urn4:ValueList>
        <urn4:Value>1</urn4:Value>
      </urn4:ValueList>
    </urn4:Slot>
    <urn4:Name>
      <urn4:LocalizedString value="Outpatient Evaluation And Management"/>
    </urn4:Name>
  </urn4:Classification>
  <urn4:Slot name="serviceStartTime">
    <urn4:ValueList>
      <urn4:Value>20110101165910</urn4:Value>
    </urn4:ValueList>
  </urn4:Slot>
  <urn4:Slot name="serviceStopTime">
    <urn4:ValueList>
      <urn4:Value>20110101165910</urn4:Value>
    </urn4:ValueList>
  </urn4:Slot>

```

```

    <urn4:Slot name="size">
      <urn4:ValueList>
        <urn4:Value>1024000</urn4:Value>
      </urn4:ValueList>
    </urn4:Slot>
    <urn4:Name>
      <urn4:LocalizedString value="Claim Supporting Medical Documentation"/>
    </urn4:Name>
    <urn4:Classification id="cl08" classificationScheme="urn:uuid:41a5887f-8865-4c09-adf7-e362475b143a"
classifiedObject="Document01" nodeRepresentation="2.16.840.1.113883.13.34.110.1.1000.1">
      <urn4:Slot name="classCode">
        <urn4:ValueList>
          <urn4:Value>1</urn4:Value>
        </urn4:ValueList>
      </urn4:Slot>
      <urn4:Name>
        <urn4:LocalizedString value="Unstructured Document Submission"/>
      </urn4:Name>
      <urn4:Classification>
        <urn4:ExternalIdentifier id="ei02" registryObject="Document01" identificationScheme="urn:uuid:96fdda7c-d067-
4183-912e-bf5ee74998a8" value="1.3.6.1.4.1.21367.2005.3.9999.33">
          <urn4:Name>
            <urn4:LocalizedString value="XDSSubmissionSet.uniqueId"/>
          </urn4:Name>
        </urn4:ExternalIdentifier>
      </urn4:ExtrinsicObject>

      <urn4:RegistryPackage id="SubmissionSet01">
        <urn4:Slot name="esMDClaimId">
          <urn4:ValueList>
            <urn4:Value>1234567890123^^^&amp;2.16.840.1.113883.13.34.110.1.999.1&amp;ISO</urn4:Value>
          </urn4:ValueList>
        </urn4:Slot>
        <urn4:Slot name="esMDCasId">
          <urn4:ValueList>
            <urn4:Value>1234567890123456789012345678901^^^&amp;2.16.840.1.113883.13.34.110.1.999.1&amp;ISO</urn4:Value>
          </urn4:ValueList>
        </urn4:Slot>
        <urn4:Slot name="intendedRecipient">
          <urn4:ValueList>
            <urn4:Value>2.16.840.1.113883.13.34.110.2.100.1</urn4:Value>
          </urn4:ValueList>
        </urn4:Slot>
        <urn4:Description>
          <urn4:LocalizedString value="esMD Claim Document Submission in response to Review Contractor ADR
Letter"/>
        </urn4:Description>
      </urn4:Classification>
    </urn4:Classification id="cl11" classificationScheme="urn:uuid: a7058bb9-b4e4-4307-ba5b-e3f0ab85e12d"
classifiedObject=" SubmissionSet01" nodeRepresentation="author">
      <urn4:Slot name="authorInstitution">
        <urn4:ValueList>
          <urn4:Value>897654</urn4:Value>
        </urn4:ValueList>
      </urn4:Slot>
      <urn4:Slot name="authorPerson">
        <urn4:ValueList>
          <urn4:Value>808</urn4:Value>
        </urn4:ValueList>
      </urn4:Slot>
    </urn4:Classification>

    <urn4:Classification id="cl09" classificationScheme="urn:uuid:aa543740-bdda-424e-8c96-df4873be8500"
classifiedObject="SubmissionSet01" nodeRepresentation="2.16.840.1.113883.13.34.110.1.1000.1">
      <urn4:Slot name="contentTypeCode">
        <urn4:ValueList>
          <urn4:Value>1</urn4:Value>
        </urn4:ValueList>
      </urn4:Slot>
    </urn4:Classification>
  
```

```

</urn4:Slot>
<urn4:Name>
  <urn4:LocalizedString value="Response to Additional Documentation Request (ADR)"/>
</urn4:Name>
</urn4:Classification>

  <urn4:ExternalIdentifier id="ei03" registryObject="SubmissionSet01" identificationScheme="urn:uuid:6b5aea1a-
874d-4603-a4bc-96a0a7b38446" value="1234567890123^&2. 16.840. 1. 113883. 13.34&ISO">
  <urn4:Name>
    <urn4:LocalizedString value="XDSSubmissionSet.patientId"/>
  </urn4:Name>
</urn4:ExternalIdentifier>
  <urn4:ExternalIdentifier id="ei04" registryObject="SubmissionSet01" identificationScheme="urn:uuid:554ac39e-
e3fe-47fe-b233-965d2a147832" value="12. 16.840. 1. 113883. 13.34. 110.2">
  <urn4:Name>
    <urn4:LocalizedString value="XDSSubmissionSet.sourceId"/>
  </urn4:Name>
</urn4:ExternalIdentifier>
  <urn4:Slot name="submissionTime">
  <urn4:ValueList>
    <urn4:Value>20110101165910</urn4:Value>
  </urn4:ValueList>
</urn4:Slot>
  <urn4:ExternalIdentifier id="ei05" registryObject="SubmissionSet01" identificationScheme="urn:uuid:96fdda7c-
d067-4183-912e-bf5ee74998a8" value="554ac39e-ef6343434-b233-965d3434555">
  <urn4:Name>
    <urn4:LocalizedString value="XDSSubmissionSet.uniqueId"/>
  </urn4:Name>
</urn4:ExternalIdentifier>
  <urn4:Name>
    <urn4:LocalizedString value="Claim Supporting Medical Documentation"/>
  </urn4:Name>
</urn4:RegistryPackage>
  <urn4:Classification id="cl10" classifiedObject="SubmissionSet01" classificationNode="urn:uuid:a54d6aa5-d40d-
43f9-88c5-b4633d873bdd"/>
  <urn4:Association id="as01" associationType="HasMember" sourceObject="SubmissionSet01"
targetObject="Document01">
  <urn4:Slot name="SubmissionSetStatus">
  <urn4:ValueList>
    <urn4:Value>Original</urn4:Value>
  </urn4:ValueList>
</urn4:Slot>
</urn4:Association>
</urn4:RegistryObjectList>
</urn2:SubmitObjectsRequest>
<!-- 1 or more repetitions:-->
  <urn5:Document id="Document01">[sample encrypted payload]</urn5:Document>
</urn:ProvideAndRegisterDocumentSetRequest>
</urn:RespondingGateway_ProvideAndRegisterDocumentSetRequest>
</soapenv:Body>
</soapenv:Envelope>

```

## 15 APPENDIX B: C62 PAYLOAD SAMPLE

<!--NOTE: The following CDA document will be sent in binary form with base 64 encoding. Here it is shown for information purposes only -->

```

<ClinicalDocument xmlns="urn:hl7-org:v3" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
classCode="DOCCLIN" moodCode="EVN" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <typeId extension="POCD_HD000040" root="2.16.840.1.113883.1.3"/>
  <id root="eab8765b-1424-47cc-9495-ddc934cf5f5d"/>
  <templateId root="2.16.840.1.113883.10.20.3" assigningAuthorityName="CDT General Header Constraints"/>
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.1.1" assigningAuthorityName="IHE Medical Document"/>
  <templateId root="1.3.6.1.4.1.19376.1.2.20" assigningAuthorityName="IHE Scanned Document"/>
  <templateId root="2.16.840.1.113883.3.88.11.62.1" assigningAuthorityName="HITS Unstructured Document"/>
  <languageCommunication>
    <templateId root="1.3.6.1.4.1.19376.1.5.3.1.2.1"/>
    <languageCode code="en-US"/>
  </languageCommunication>
  <title>ADR Response Supported Claim Documentation</title>
  <confidentialityCode code="V" codeSystem="2.16.840.1.113883.5.25" codeSystemName="Confidentiality"
displayName="Very Restricted"/>
  <effectiveTime value="20100319083838-0500"/>
  <recordTarget>
    <patientRole>
      <id extension="12345" root="2.16.840.1.113883.3.933"/>
      <addr>
        <streetAddressLine>NA</streetAddressLine>
        <city>NA</city>
        <state>NA</state>
        <postalCode>NA</postalCode>
        <country>NA</country>
      </addr>
      <patient>
        <name>
          <prefix>NA</prefix>
          <given>NA</given>
          <family>NA</family>
        </name>
        <administrativeGenderCode code="F"
codeSystem="2.16.840.1.113883.5.1"/>
        <birthTime value="19600127"/>
      </patient>
    </patientRole>
  </recordTarget>
  <author>
    <templateId root="1.3.6.1.4.1.19376.1.2.20.1"/>
    <time value="19990522"/>
    <assignedAuthor>
      <id extension="11111111" root="1.3.5.35.1.4436.7"/>
      <assignedPerson>
        <name>
          <prefix>NA</prefix>
          <given>NA</given>
          <family>NA</family>
          <suffix>NA</suffix>
        </name>
      </assignedPerson>
      <representedOrganization>
        <id extension="aaaaabbbb" root="1.3.5.35.1.4436.7"/>
        <name>NA</name>
      </representedOrganization>
    </assignedAuthor>
  </author>
  <author>
    <templateId root="1.3.6.1.4.1.19376.1.2.20.2"/>
    <time value="20050329224411+0500"/>
    <assignedAuthor>

```

```

<id root="1.3.6.4.1.4.1.2835.2.1234"/>
  <assignedAuthoringDevice>
    <code code="CAPTURE" displayName="Image Capture" codeSystem="
1.2.840.10008.2.16.4" />
    <manufacturerModelName>NA</manufacturerModelName>
    <softwareName>NA</softwareName>
  </assignedAuthoringDevice>
  <representedOrganization>
    <id root="1.3.6.4.1.4.1.2835.2"/>
    <name>SOME Scanning Facility</name>
    <addr>
      <streetAddressLine>NA</streetAddressLine>
      <city>NA</city>
      <state>NA</state>
      <postalCode>NA</postalCode>
      <country>NA</country>
    </addr>
  </representedOrganization>
</assignedAuthor>
</author>
<dataEnterer>
  <templateId root="1.3.6.1.4.1.19376.1.2.20.3"/>
  <time value="20050329224411+0500"/>
  <assignedEntity>
    <id extension="22222222" root="1.3.6.4.1.4.1.2835.2"/>
    <assignedPerson>
      <name>
        <prefix>NA.</prefix>
        <given>NA</given>
        <family>NA</family>
      </name>
    </assignedPerson>
  </assignedEntity>
</dataEnterer>
<custodian typeCode="CST">33333
  <time value="19990522"/>
  <signatureCode code="S"/>
  <assignedEntity>
    <id extension="11111111" root="1.3.5.35.1.4436.7"/>
    <assignedPerson>
      <name>
        <prefix>NA</prefix>
        <given>NA</given>
        <family>NA</family>
        <suffix>NA</suffix>
      </name>
    </assignedPerson>
  </assignedEntity>
</legalAuthenticator>
<documentationOf>
  <serviceEvent >
    <effectiveTime>
      <low value="19800127"/>
      <high value="19990522"/>
    </effectiveTime>
  </serviceEvent>
</documentationOf>
  <component>
    <nonXMLBody>
      <text mediaType="application/pdf" representation="B64">
1PD94bWwgdmVyc2lvLkdJFLKDFFAASDOI34396Zz0iVVRGLTgiPz4NCjxDbGluaWNhbERvY3VtZW5
      </text>
    </nonXMLBody>
  </component>
</ClinicalDocument>

```

## 16 APPENDIX C: TEST CASES

The following table provides test cases for HIHs. HIHs are required to submit the request and response XMLs for each scenario in one single file to QSSI for verification.

**Table 25: Test Cases**

Test Case #	Test Case Description	Scenario and Steps	Expected Result
1.	The esMD Gateway will ensure that the HIH is CMS onboarded, by validating its Home Community ID (OID) in the XDR deferred document submission request against the esMD database.	1a. HIH OID is valid  Step: HIH sends a submission request with correct HIH OID.	a. esMD Gateway will read the HIH Home Community ID (OID) from the Assertions attributes. b. The XDR deferred document submission request will proceed with further validation steps in the esMD Application.
		1b. HIH OID is invalid/HIH not onboarded  Steps: HIH sends a submission request with incorrect HIH OID.	The esMD Gateway will respond to the submitting HIH with the 'XDSHOIdDoesNotMatch' error in XDR deferred document submission response message. The esMD Transaction ID, Unique ID and Message IDs will be sent back to the HIH along with the failed status message in the response.
2.	The esMD Gateway will validate the participation of the intended recipient (Review Contractor) by validating its Home Community ID (OID) in the XDR deferred document submission request against the esMD database.	2a. Intended Recipient OID is valid  Step: HIH sends a submission request with correct Intended Recipient OID.	a. esMD reads the Review Contractor's Home Community ID (OID) from the Assertions attributes. b. The XDR deferred document submission request will proceed with further validation steps in the esMD Application.
		2b. Intended Recipient OID is invalid  Step: HIH sends a submission request with incorrect Intended Recipient OID.	The esMD Gateway will respond to the submitting HIH with the 'XDSHOIdDoesNotMatch' error in XDR deferred document submission response message. The esMD Transaction ID, Unique ID and Message IDs will be sent back to the HIH along with the failed status message in the response.
3.	To avoid duplicate submission, esMD Gateway will validate the uniqueness of the XDR deferred document submission request by validating the Unique ID against the esMD database.	3a. Unique Submission Request.  Step: HIH sends a submission request with a Unique ID in the HTTP Header SAML Assertions.	The XDR deferred document submission request will proceed with further validation steps in the esMD Application.
		3b. Duplicate Submission Request.  Step: HIH sends a submission request with a Unique ID in the HTTP Header SAML Assertions, which were previously sent.	The esMD Gateway will respond to the submitting HIH with the 'XSDuplicateUniqueldInRegistry' error in XDR deferred document submission response message. The esMD Transaction ID, Unique ID and Message IDs will be sent back to the HIH along with the failed status message in the response.

Test Case #	Test Case Description	Scenario and Steps	Expected Result
4.	The esMD Gateway will validate the conformance of XDR message Submission Set and Document Set metadata attributes (as mentioned in the esMD Implementation Guide) in the XDR deferred document submission request sent by the HIH.	<p>4a. XDR Conformant message.</p> <p>Step: HIH sends a submission request with XDR Submission Set and XDR Document Set attributes as per Implementation Guide specifications.</p>	The XDR deferred document submission request will proceed with further validation steps in the esMD Application.
		<p>4b. XDR non – conformant message.</p> <p>Step: HIH sends a XDR deferred document submission request with XDR Submission Set and/or XDR Document Set metadata attributes missing.</p>	The esMD Gateway will respond to the submitting HIH with the 'XDSRegistryMetadataError' in XDR deferred document submission response message. The esMD Transaction ID, Unique ID and Message IDs will be sent back to the HIH along with the failed status message in the response.
5.	The esMD Gateway will validate the esMD affinity values (Class Code, Type Code, Format Code, Healthcare Facility Type Code, Confidentiality Code -- as defined in the esMD Implementation Guide) in the submitted XDR Message of the XDR deferred document submission request against the esMD database.	<p>5a. esMD affinity codes are conformant.</p> <p>Step: HIH sends a submission request with the esMD affinity values in the XDR Message consistent with those specified in the esMD Implementation Guide.</p>	The XDR deferred document submission request will proceed with further validation steps in the esMD Application.
		<p>5b. esMD affinity codes are non-conformant.</p> <p>Steps: HIH sends a submission request with the esMD affinity code values incorrect/missing.</p>	The esMD Gateway will respond to the submitting HIH with the 'XDSRegistryMetadataError' in XDR deferred document submission response message. The esMD Transaction ID, Unique ID and Message IDs will be sent back to the HIH along with the failed status message in the response.
6.	The esMD Gateway will validate the presence of the C62 payload (PDF document/s) in the XDR deferred document submission request.	<p>6a. Payload present</p> <p>Step: HIH sends a submission request with the payload present.</p>	The XDR deferred document submission request will proceed with further validation steps in the esMD Application.
		<p>6b. Payload not present.</p> <p>Step: HIH sends a submission request without a payload.</p>	The esMD Gateway will respond to the submitting HIH with the 'XDSMissingDocument' error message in XDR deferred document submission response message. The esMD Transaction ID, Unique ID and Message IDs will be sent back to the HIH along

Test Case #	Test Case Description	Scenario and Steps	Expected Result
			with the failed status message in the response.
7.	Upon successful transmission of the XDR deferred document submission request by the HIH Gateway, esMD Gateway will send a HTTP 200 acknowledgement (1 <sup>st</sup> message) to the HIH gateway.	7a. HTTP 200 Acknowledgement.  Step: HIH sends a XDR deferred document submission request to the esMD Gateway.	The esMD Gateway will respond to the submitting HIH Gateway with a HTTP 200 transmission acknowledgement.
8.	Upon conformation and validation checks, and submission of the payload to the Enterprise File Transfer system, esMD Gateway will send the status and notification message (2 <sup>nd</sup> message) to the HIH Gateway.	8a. Delivery to Enterprise File Transfer systemT notification.  Step: HIH sends a XDR conformant deferred document submission request to the esMD Gateway.	a. The conformance and validation check is successful, and the payload is submitted to Enterprise File Transfer system. b. The esMD Gateway will respond to the submitting HIH Gateway with a successful conformance and validation status, and a successful XDR deferred document submission response message.
		8b. Failed delivery to Enterprise File Transfer system notification.  Step: HIH sends a XDR non-conformant submission request to the esMD Gateway.	a. The conformance and validation check is failed and the payload is not submitted to Enterprise File Transfer system. b. The esMD Gateway will respond to the submitting HIH Gateway with a failed conformance and validation status, and a failed XDR deferred document submission response message.
9.	The esMD Gateway will send a notification message (3 <sup>rd</sup> message) to the HIH after the review contractor (Intended Recipient) picks up the submitted	9 a. Review Contractor pickup notification.  Step: HIH sends a XDR conformant submission request to the esMD.	a. The review contractor (Intended Recipient) picks up the documentation from the Enterprise File Transfer system. b. The esMD Gateway responds to the submitting HIH Gateway with a review contractor (Intended Recipient) pickup response message.

## 17 APPENDIX D: TEST TYPES FOR HIHS

This section provides descriptions and details for the five phases of testing that need to be performed by the HIHS during the testing of their gateways with the CMS esMD Gateway. Successful completion of these tests is essential for the HIHS before they are declared production-ready.

The five phases of testing are as follows:

- Connectivity Test in Validation Environment (Performed using SoapUI tool and HIH gateway).
- Functionality Test in Validation Environment (Performed using the HIH application and HIH gateway & not through SoapUI tool).
- End-to-End Test in Validation Environment (performed using the HIH application and HIH gateway involving Review Contractor & not through SoapUI tool).
- Connectivity Test in Production Environment (Performed using SoapUI tool and HIH Gateway).
- End-to-End Test in Production Environment (performed using the HIH application and HIH gateway involving Review Contractor & not through SoapUI tool).

The paragraphs below explain the above tests in detail.

### Connectivity Test in the Validation Environment Using SOAP UI Tool

Tests are performed in this area to confirm connectivity between the HIH Gateway and the CMS esMD Gateway. Confirmation of connectivity between the two gateways is essential before the CMS esMD Gateway can receive and process the XDR deferred document submission requests sent from the HIH Gateway. For details on how to configure SoapUI, please, refer to Appendix D.

#### 17.1 Testing Inbound Connection (HIH Gateway to CMS esMD Gateway)

The purpose of this test is to ensure inbound connectivity between the HIH Gateway and the CMS esMD Gateway using HIH IP Address validation at the CMS AT&T Router, CMS Firewalls, and TLS Mutual Certificate Authentication.

##### 17.1.1 Inbound Telnet Test

The purpose of this sub-test is to verify whether the inbound network connection between the HIH Gateway and the CMS esMD Gateway were established by doing the simple telnet test from the HIH Gateway. Under this test, the HIH IP addresses Inbound Configurations at the CMS AT&T Router/CMS Firewall will be verified.

##### Pre-requisite:

- Participating HIHS will submit their public facing IP address to CMS/QSSI esMD Team 7 weeks before the scheduled testing date. This is submitted via the HIH Introductory Details form. **\*Any changes to the IP address after submission to the CMS/QSSI esMD Team could possibly cause a delay in testing and may result in the HIH being moved to the next quarterly onboarding group.** The HIH will verify with their firewall team whether their environment might need HIH outbound (HIH to CMS esMD Gateway) IP address NATing to CMS esMD Gateway. CMS esMD inbound IP address for 'esmdg.cms.cmsval' will be shared by esMD HIH coordinators.
- The CMS/QSSI esMD Gateway Contractor, CMS CITIC contractor, and AT&T teams will process and configure the HIH IP address routing rules in the CMS AT&T router and CMS firewalls to allow the traffic from the HIH Gateway.

The following is a sequence of events at this level:

1. The QSSI esMD Team arranges a conference call with the HIH and the CMS CITIC contractor.

2. During the conference call, HIHs set up a telnet session between their gateway and the AT&T/CMS Firewall.
3. The CMS CITIC contractor watches over the incoming traffic from the HIH Gateway at the AT&T/CMS firewall level and confirms the inbound telnet connectivity.
4. HIH Gateway and Firewall teams will confirm the inbound telnet connectivity test at HIH end.

A successful telnet session indicates established inbound telnet connectivity between the HIH network and the CMS network.

### 17.1.2 HIH Mutual TLS Certificate Authentication

Based upon a successful Telnet session (step 17.1.1.1- inbound telnet test), this step is performed during the same conference call, or a different conference call, depending upon the availability of resources from the QSSI esMD Team, the CMS CITIC contractor, and the HIH.

#### Pre-requisite:

- Participating HIHs will submit their Gateway Certificate Authority Public Certificate to the CMS/QSSI esMD Team 7 weeks before the scheduled testing date. **\*Any changes to the CA certificate after submission to the CMS/QSSI esMD Team could possibly cause a delay in testing and may result in the HIH being moved to the next quarterly onboarding group.**
- The CMS/QSSI esMD Gateway Contractor, CMS CITIC contractor, and AT&T teams configure the HIH IP address routing rules in the CMS AT&T router and CMS firewalls to allow traffic from the HIH Gateway.
- HIH Gateway domain configuration will have esMD specific TLS CIPHER Suites with FIPS Mode. The CMS CIPHER Suites will be added in the future.

The following are the sequence of events at this level:

1. The HIH submits the XDR deferred document submission request to the CMS esMD Gateway using the SoapUI tool.
2. The HIH TLS mutual Certificate authentication will occur between the HIH Gateway and the CMS esMD environment in two levels:
  - Mutual authentication between the CMS SSLM appliance and the HIH Gateway;
  - TLS Cipher Suite validation between the CMS SSLM appliance and the HIH Gateway; and
  - HIH Certificate validation at the CMS esMD Gateway.
3. The successful mutual authentication between the HIH Gateway and the CMS esMD Gateway will get an HTTP 200 Acknowledgment from the esMD Gateway to the HIH Gateway. The HIH will submit the test results to the QSSI esMD Team for confirmation.
4. The QSSI esMD Team and the CMS CITIC contractor will confirm the successful incoming mutual authentication.

### 17.1.3 Confirmation of Metadata Validation and Request Processing

The purpose of this step is to confirm successful metadata validation and request processing by the CMS esMD Gateway. The QSSI esMD Team along with CMS CITIC Contractor analyze the gateway and adaptor logs (along with database) to confirm metadata validation and request processing. If any anomalies are found, they are reported to the HIH.

### 17.1.4 Confirmation of Metadata Persistence in the esMD Database

In this step, QSSI esMD DBA team analyzes the database for successful persistence of the audit events and data sent by the HIHs. All transaction related audit events and metadata persistence would be verified. Any errors or exceptions found are reported to the HIHs.

In addition, esMD system will send the errors and exceptions as a part of esMD response message. These errors and exceptions can be found in the HIH esMD Gateway logs.

## **17.2 Testing Outbound Connection (CMS esMD Gateway to HIH Gateway)**

The purpose of this test is to verify if the outbound connections are establishing between the CMS esMD Gateway and the HIH Gateway.

### **17.2.1 Outbound Telnet Test**

The purpose of this sub-test is to verify whether the outbound network connection between the HIH Gateway and CMS esMD Gateway were established by doing the simple telnet test from the CMS esMD Gateway. Under this test, the HIH IP address outbound configurations at the CMS AT&T Router/CMS Firewall will be verified.

#### Pre-requisite:

- Participating HIHs will configure their firewall to allow the CMS esMD Gateway IP address prior to the scheduled testing date. The CMS esMD Gateway outbound IP address will be shared by esMD HIH coordinators.
- The HIH will verify with their firewall team if their gateway has the NATing for the inbound request coming from the CMS esMD Gateway.

The following is a sequence of events at this level:

1. The QSSI esMD Team arranges a conference call with the HIH and the CMS CITIC contractor.
2. During the conference call, the esMD Team performs the telnet connection between the CMS esMD Gateway and the HIH Gateway.
3. The HIH firewall team monitors the incoming traffic from the esMD Gateway at their firewall and confirms the outbound telnet connectivity.

A successful telnet session indicates established outbound telnet connectivity between the esMD Gateway and the HIH network.

This step is carried out in parallel to the Step 17.1.1.1 (inbound telnet test). A telnet session is set up to check the connectivity between the CMS esMD Gateway and the HIH Gateway. A successful telnet session confirms connectivity between the two gateways.

### **17.2.2 Confirmation of Receiving the First Notification**

Based on the results of the validations mentioned below, an asynchronous XDR Response message is sent to the HIH Gateway by the CMS esMD Gateway:

- Validation of the syntax;
- Validation of the semantics with the esMD affinity domain values;
- Validation for duplicate Unique ID;
- Validation of the participation of intended recipient (i.e., the review contractor); and
- Validation of the HIH OID.

The response message could take anywhere from less than 1 minute up to 10 minutes based on the size of attachment (i.e., the payload). Confirmation of receipt of this notification message by the HIH indicates a success scenario.

Completion of all the above steps successfully confirms connectivity between the HIH Gateway and the CMS esMD Gateway. A congratulatory email is sent by QSSI to the HIH indicating this success.

### **17.3 Functionality Testing in the Validation Environment (Testing with HIH Gateway Application)**

Tests in this phase are performed to confirm that the HIH application will send proper metadata and payload (PDFs) to the CMS esMD Gateway using their esMD application and esMD HIH Gateway. The esMD Gateway validates and processes the metadata and will deliver payload to the Enterprise File Transfer system..

The purpose of this phase of testing is to test different functionality case scenarios to ensure the HIH Gateway is getting the proper acknowledgements, notifications, and error messages, if any, back from the CMS esMD Gateway.

HIHs should refer to the test cases in Appendix B of this Guide, run the tests, and send the requests and response messages (i.e., results) to the esMD Team via the HIH coordinator. The esMD Team will analyze and report the results to the HIH.

#### **17.4 Inbound Tests (HIH to CMS esMD Gateway)**

The purpose of this test is to establish that the HIH Gateway is able to connect through their application and to verify that the HIH Gateway is able to establish the connection without using the SoapUI.

##### **17.4.1 Validate Metadata and Request Processing**

The XDR deferred document submission request is submitted by the HIH using its gateway application (and not SoapUI). The QSSI esMD Team analyzes the gateway and adaptor logs to confirm metadata validation and request processing. If any anomalies are found, they are reported to the HIH.

##### **17.4.2 Metadata Persistence in the esMD Database**

In this step, the QSSI esMD DBA team analyzes the database for successful persistence of the data sent by the HIHs. All transaction related audit events, submission related audit events, and metadata value persistence are checked for persistence. Any errors found are reported to the HIH.

##### **17.4.3 Delivery to Enterprise File Transfer system**

In this step, the QSSI esMD Team confirms the payload delivery to the CMSEFT.

#### **17.5 Outbound Tests (HIH to CMS esMD Gateway)**

Delivery of the first notification response (about payload delivery to the EFT) to the HIH Gateway from the CMS esMD Gateway confirms a successful scenario.

At the end of the Functionality Testing, a congratulatory email is sent by the QSSI esMD Team to the participating HIH.

### **17.6 End-to-End Testing in the Validation Environment (Testing with HIH Gateway Application & Not SOAP UI)**

Tests in this phase are performed to ensure the HIH's submitted metadata is validated and delivered to the EFT and, ultimately, delivered on to the review contractor. In addition, this testing will ensure that once the review contractor picks up the submitted documents, the notification will be sent back to the HIH regarding the pickup status.

##### **17.6.1 Testing With an Assigned Review Contractor**

In advance of this step, the HIH is provided with review contractor OIDs, test claim IDs, and test case IDs by the HIH Coordinator. Any test PDF payloads are used in this testing.

In this step, the HIH sends the XDR deferred document submission request using their gateway application to the CMS esMD Gateway.

The HIH coordinator facilitates communication with involved review contractors to retrieve XML and PDF payloads. The HIH coordinator will record the results of testing and share with the HIH technical lead.

#### **17.6.2 Receipt of Second Notification (Review Contractor Pickup)**

After sending the XDR deferred document submission request to the CMS esMD Gateway (step 2.3.1 above), it is verified if the HIH received the second notification from the CMS esMD Gateway. Receipt of the second notification response (review contractor pick-up) confirms and concludes a successful end-to-end testing.

#### **17.7 Connectivity Test in the Production Environment**

The same steps outlined in section 17.1 are followed with this phase of testing in the Production environment.

#### **17.8 End-to-End Testing in the Production Environment**

The same steps outlined in section 17.3 are followed with this phase of testing in the Production environment.

## 18 APPENDIX E: SOAP UI CONFIGURATION

The purpose of this section is to provide the HIH with instructions for how to setup the SoapUI in their environment. The HIH must configure the SoapUI in order to use the SoapUI test cases provided by QSSI. The SoapUI is necessary to allow the HIH to perform the connectivity testing. The HIH will submit the test through the SoapUI using their esMD Gateway establishing a connection to the CMS esMD Gateway.

For more detailed step-by-step instructions, please, refer to the esMD SharePoint site in the "How To" Guides folder.

### 18.1 Download and Initial Configuration

- A. Download and install SoapUI 3.5.1 from <http://sourceforge.net/projects/soapui/files/soapui/3.5.1>
- B. After SoapUI has been installed, perform the following steps to complete the configuration:
  1. Launch SoapUI;
  2. Select the File -> Preferences option;
  3. Make sure the HTTP version is set to 1.1;
  4. Enter "300000" into the Socket Timeout field;
  5. Press the "OK" button; and
  6. Select the File -> Save Preferences menu option.
- C. Download the sample SOAP message from QSSI esMD SharePoint site. Please, note that only authorized HIHs can access SharePoint. If you are an authorized HIH and do not have access to SharePoint, please, contact the CMS esMD Help Desk ([CMSesMDHelpdesk@qssinc.com](mailto:CMSesMDHelpdesk@qssinc.com)).

### Test Execution

The following steps outline the actions required to execute the Soap UI test.

1. Start Application Server on the Gateway machine and verify all desired applications are deployed.
2. Start the SoapUI application from the Soap UI Installation Directory.
3. Open the EndToEndSelfTest SoapUI project by selecting File->Import Project and navigate to the SoapUI Validation Suite Installation directory and select EndToEndSelfTest-soapui-project.xml.
4. Navigate to EndToEndSelfTest SoapUI project and change following custom properties before running the test:

LocalAA = HIH's OID

LocalHCID = HIH's OID

RemoteAA = CMS Val Gateway's OID

RemoteHCID = CMS Val Gateway's OID

5. Navigate to the EndToEndSelfTest TestSuite -> XDR Async -> Test Steps (1) -> EntityXDRRequest and double click it to open Soap message in XML Editor and change the Unique ID before running the test:

(i.e.,  
`<urn1:assertion>`  
`<urn1:id>[UniqueID]</urn1:id>`  
`.....`  
`.....`  
`</urn1:assertion>`)

6. In the right panel (footer area) of the Soap UI tool, click on 'WS-A' button and change MessageID property before running the test:

Remember to change the UniqueID and Message ID before executing any test from the SoapUI tool.

## 19 APPENDIX F: SUBMISSION GUIDELINES FOR CERTIFIED HIHS

The esMD Gateway is built using the CONNECT software, which has a file size limitation of 50 MB per each submission. This file size of 50 MB includes the SOAP envelope packaging, the metadata, and the encoded PDF document. HIHS need to make sure the PDF payload should be **no more than 45 MB prior to encoding**.

With the implementation of esMD R3.0, submission requests with a payload size exceeding 50MB shall be rejected.

## 20 APPENDIX G: PMD PA Reason Identifiers and Statements

**Table 26: PMD PA Reason Codes – 7 Element Order**

Reason Code	7-Element Order
PMD1A	The documentation submitted for review does not include a 7-element order.
PMD1B	The 7-element order is illegible.
PMD1C	The imaged copy of the 7-element order is of poor quality and is, thereby, illegible.
PMD1D	The 7-element order is missing the beneficiary's name.
PMD1E	The 7-element order contains an incorrect beneficiary's name.
PMD1F	The 7-element order is missing the description of the power mobility device being ordered.
PMD1G	The 7-element order is missing the date of face-to-face examination.
PMD1H	The 7-element order contains an invalid date of the face-to-face examination.
PMD1I	The 7-element order is missing pertinent diagnosis/condition(s) that are directly related to the need for the power mobility device.
PMD1J	The 7-element order is missing the length of need.
PMD1K	The 7-element order is missing the treating physician's signature.
PMD1L	The 7-element order contains a physician's signature, which does not comply with the CMS signature requirements.
PMD1M	The 7-element order is missing the date the treating physician signed the order.
PMD1N	The 7-element order contains an invalid date of when the treating physician signed the order.
PMD1O	The supplier did not receive a valid copy of the 7-element order within 45 days of the completion date of the face-to-face examination.
PMD1P	The 7-element order was obtained before the face-to-face examination was completed.
PMD1Q	It is undetermined who completed all sections of the 7-element order.
PMD1R	Some or all elements of the 7-element order were not completed by the treating physician.
PMD1S	The 7-element order is combined with the detailed product description (DPD). The 7-element order should be received prior to the supplier preparing the DPD.
PMD1T	The ordering physician is a Podiatrist (DPM) or Chiropractor (DC).
PMD1U	The 7-element order contains corrections/changes that do not comply with accepted record keeping principles.
PMD1V	The 7-element order requires a date stamp (or equivalent) to document the receipt date of the order by the supplier.
PMD1Z	The 7-element order was flawed. Please see hard copy letter for details.

**Table 27: PMD PA Reason Codes – General Face-to-Face Exam/Medical Records PMD**

Reason Code	General Face to Face Exam/Medical Records
PMD2A	The documentation submitted for review does not include a face-to-face mobility examination.
PMD2B	The face-to-face examination requires a date stamp (or equivalent) to document the receipt date of the examination by the supplier.
PMD2C	The face-to-face examination received was insufficient to establish that one of the major reasons for the examination was for a mobility evaluation.
PMD2D	The face-to-face examination did not specify objective measurements of the beneficiary's limitations for performing mobility related activities of daily living.

<b>Reason Code</b>	<b>General Face to Face Exam/Medical Records</b>
PMD2E	Claims history indicates the beneficiary has received a similar power mobility device (PMD) within the past five years. The documentation does not provide evidence that the beneficiary has had a change in their medical condition that meets the medical necessity for the requested PMD.
PMD2F	Claims history indicates the beneficiary has same or similar durable medical equipment as what is requested. The documentation received does not indicate the rationale for the new power mobility device requested.
PMD2G	The documentation does not support that the beneficiary's power mobility device has not reached its reasonable useful lifetime and does not support that it was lost, stolen or irreparably damaged in a specific incident.
PMD2H	The face-to-face examination or other medical documentation received indicates the beneficiary's primary need for the power mobility device is to be used outside of their home.
PMD2I	The face-to-face examination indicates there is a physical or mental deficit that is not explained that may prevent the safe use of the power mobility device.
PMD2J	The face-to-face examination and other medical records submitted for review contain conflicting information.
PMD2K	The face-to-face examination has been completed on a limited space template with insufficiently detailed or incomplete narrative from the physician. This template may be used to assist in documenting the face-to-face examination, however information either must be sufficiently completed on the form or be documented in the physician's other medical records provided.
PMD2L	The face-to-face examination was not completed by the same practitioner that signed the 7-element order.
PMD2M	The face-to-face examination was not completed prior to the treating physician writing 7-element order.
PMD2N	The supplier did not receive a valid copy of the face-to-face examination within 45 days of the completion date.
PMD2O	The face-to-face documents contain corrections/changes that do not comply with accepted record keeping principles.
PMD2P	The face-to-face examination contains a physician's signature, which does not comply with the CMS signature requirements.
PMD2Q	The face-to-face examination was not signed; therefore the identity and credentials of the author cannot be authenticated.
PMD2R	The delivery date of the power mobility device must be within 120 days following the completion of the face-to-face examination. This timeframe has been exceeded.
PMD2S	The face-to-face documentation by the physician is illegible.
PMD2T	The imaged copy of the physician's face-to-face documentation is of poor quality and is, thereby, illegible.
PMD2Z	The face-to-face examination was flawed. Please see hard copy letter for details.

**Table 28: PMD PA Reason Codes – LCD Criteria Specifics**

<b>Reason Code</b>	<b>LCD Criteria Specific</b>
PMD3A	The face-to-face examination does not indicate the beneficiary's mobility limitations that would establish significant impairment to participate in mobility-related activities of daily living (MRADLs) within their home.
PMD3B	The face-to-face examination does not indicate the beneficiary's mobility limitation

Reason Code	LCD Criteria Specific
	cannot be sufficiently and safely resolved by the use of an appropriately fitted cane or walker.
PMD3C	The face-to-face examination does not indicate that the beneficiary's limitation of upper extremity function is insufficient to self-propel an optimally configured manual wheelchair in the home in order to perform mobility-related activities of daily living (MRADLs).
PMD3D	The face -to-face examination does not indicate the beneficiary is able to safely transfer to and from the power mobility device.
PMD3E	The face -to-face examination does not indicate the beneficiary is able to operate the tiller steering system of the power mobility device.
PMD3F	The face -to-face examination does not indicate the beneficiary is able to maintain postural stability and position while operating the power mobility device in their home.
PMD3G	The face-to-face examination does not indicate that the beneficiary has the physical capability to safely operate the power mobility device being requested.
PMD3H	The beneficiary's weight does not meet the weight capacity for the power mobility device being requested.
PMD3I	The face-to-face examination does not indicate the use of the power mobility device (PMD) will significantly improve the beneficiary's ability to participate in mobility related activities of daily living (MRADLs) and the beneficiary will use the PMD in their home.
PMD3J	The face-to-face examination indicates the beneficiary has expressed an unwillingness to use the power mobility device in the home.
PMD3K	The face-to-face examination does not indicate that the beneficiary has the mental capability to safely operate the power mobility device being requested.
PMD3L	The face-to-face examination does not indicate that the caregiver who will be operating the power mobility device is unable to adequately propel an optimally configured manual wheelchair.
PMD3M	The face-to-face examination indicates that the beneficiary is unable to safely operate the power mobility device; however the documentation does not indicate the caregiver is available, willing and able to safely operate the power mobility device requested.
PMD3N	The face-to-face examination does not indicate that the use of a power-operated vehicle (POV) has been excluded.
PMD3Q	The documentation does not indicate that the beneficiary requires a drive control interface other than a hand or chin-operated standard proportional joystick, or that the beneficiary meets the coverage criteria for a power tilt or power recline seating system and the system is being used on the power mobility device.
PMD3R	The specialty evaluation does not document the medical necessity for the power mobility device and its special features.
PMD3S	The documentation does not indicate that the beneficiary meets coverage criteria for a power tilt and recline seating system and the system is being used on the power mobility device, <b>or</b> that the beneficiary uses a ventilator that is mounted on the power mobility device.
PMD3T	The documentation does not indicate the beneficiary's mobility limitations are due to a neurological condition, myopathy, or congenital skeletal deformity.
PMD3U	The documentation does not support that the beneficiary is expected to grow in height.
PMD3Z	The documentation in the face-to-face examination related to the LCD was flawed. Please see hard copy letter for details.

**Table 29: PMD PA Reason Codes – Detailed Product Descriptions**

Reason Code	Detailed Product Description
PMD4A	The documentation submitted for review does not include a detailed product description.
PMD4B	The detailed product description is missing the beneficiary's name.
PMD4C	The detailed product description contains an incorrect beneficiary's name.
PMD4D	The detailed product description is missing the physician identification information.
PMD4E	The detailed product description contains incorrect physician identification information.
PMD4F	The detailed product description is illegible.
PMD4G	The imaged copy of the detailed product description is of poor quality and is illegible.
PMD4H	The detailed product description contains insufficient detail to properly identify the item(s) to be dispensed in order to determine they are properly coded.
PMD4I	The detailed product description contains a physician's signature that does not comply with the CMS signature requirements.
PMD4J	The detailed product description is not dated properly by the physician.
PMD4K	The detailed product description is missing a date stamp (or equivalent) indicating when it was received by the supplier from the physician.
PMD4L	The detailed product description is invalid as it was prepared prior to the date the 7-element order was received by the supplier.
PMD4M	The detailed product description contains corrections/changes that do not comply with accepted record keeping principles.
PMD4N	The detailed product description contains a Healthcare Common Procedure Coding System (HCPCS) code that is not consistent with the narrative description of the power mobility device as assigned by the Medicare Pricing, Data Analysis, and Coding (PDAC).
PMD4O	The detailed product description contains a power mobility device that has not been coded by the Medicare Pricing, Data Analysis, and Coding (PDAC) contractor at the time of the request.
PMD4P	The detailed product description is not signed and dated by the physician.
PMD4Q	The detailed product description is not dated by the physician.
PMD4Z	The detailed product description was flawed. Please see hard copy letter for details.

**Table 30: PMD PA Reasons Codes – Medical Records**

Reason Code	Medical Records
PMD5A	The medical record documentation received was illegible.
PMD5B	The imaged copy of the medical record documentation is of poor quality and is illegible.
PMD5C	The medical documentation is missing a physician's signature therefore the identity and credentials of the author cannot be authenticated.
PMD5D	The medical documentation contains an illegible signature, and no signature log or attestation statement was submitted. Therefore, the identity and credentials of the author cannot be authenticated.
PMD5E	The medical record contains corrections/changes that do not comply with accepted record keeping principles.
PMD5F	The medical record documentation contains a physician's signature that does not comply with the CMS signature requirements.

PMD5G	The medical record does not contain the beneficiary's weight.
PMD5Z	The medical record documentation was flawed. Please see hard copy letter for details.

**Table 31: PMD PA Reason Codes – Assistive Technology Professional**

Reason Code	Assistive Technology Professional
PMD6A	The documentation does not include verification that the supplier's Assistive Technology Professional has a current Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) certification.
PMD6B	The documentation does not provide evidence that a Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) certified professional, employed by the supplier, had direct in-person involvement in the selection of the power mobility device for this beneficiary.
PMD6C	The documentation for the Assistive Technology Professional contains corrections/changes that do not comply with accepted record keeping principles.
PMD6Z	The documentation for the Assistive Technology Professional was flawed. Please see hard copy letter for details.

**Table 32: PMD PA Reason Codes – LCMP/PT/OT**

Reason Code	LCMP/PT/OT
PMD7A	The documentation does not include a signed and dated attestation by the supplier or licensed/certified medical professional (LCMP) stating they have no financial relationship with the supplier.
PMD7B	The documentation does not include a specialty evaluation performed by a licensed/certified medical professional (LCMP), such as a physical therapist (PT) or occupational therapist (OT), or a physician who has specific training and experience in rehabilitation wheelchair evaluations, and who has no financial relationship with the supplier.
PMD7C	The specialty evaluation completed by the licensed/certified medical professional (LCMP) did not have evidence of concurrence by the treating physician. The physician must either state concurrence or any disagreement, and sign and date the evaluation, or the physician's visit notes must state concurrence or any disagreement to the examination.
PMD7D	The mobility examination completed by the licensed/certified medical professional (LCMP) did not have evidence of concurrence by the treating physician. The physician must either state concurrence or any disagreement, and sign and date the evaluation, or the physician's visit notes must state concurrence or any disagreement to the examination.
PMD7E	The attestation by the licensed/certified medical professional (LCMP) contains corrections/changes that do not comply with accepted record keeping principles.
PMD7F	The specialty evaluation by the licensed/certified medical professional (LCMP) contains corrections/changes that do not comply with accepted record keeping principles.
PMD7G	The mobility examination completed by the licensed/certified medical professional (LCMP) is illegible.
PMD7H	The imaged copy of the mobility examination completed by the licensed/certified medical professional (LCMP) is of poor quality and is, thereby, illegible.
PMD7I	The licensed/certified medical professional's (LCMP) signature that does not comply with the CMS signature requirements.
PMD7Z	The licensed/certified medical professional (LCMP) was flawed. Please see hard

Reason Code	LCMP/PT/OT
	copy letter for details.

**Table 33: Miscellaneous PMD PA Reason Codes**

Reason Code	Other
PMD8A	An affirmative decision was made on a previously submitted prior authorization request for this beneficiary.
PMD8B	No determination letter was sent to the supplier due to insufficient identification information.
PMD8C	No determination letter was sent to the physician due to insufficient identification information.
PMD8D	No determination letter was sent to the beneficiary due to insufficient identification information.
PMD8E	A power mobility device with Captain's Chair is not appropriate for the beneficiary who (1) has a pressure ulcer; (2) is at high risk for development of a pressure ulcer and is unable to perform a functional weight shift; (3) or has a documented need for a separate wheelchair seat and/or back cushion.
PMD8Z	The miscellaneous documentation was flawed. Please see hard copy letter for details.

**Table 34: Rejection/Invalid PAR Reason Codes**

Reason Code	Rejection/Invalid PAR
PMD9A	The beneficiary does not reside in this jurisdiction. Please resubmit your request to Jurisdiction-A at NHIC, P.O. Box 9170, ATTN: Prior Authorizations, Hingham, MA 02043 or fax to 781-383-4519.
PMD9B	The beneficiary does not reside in this jurisdiction. Please resubmit your request to Jurisdiction-B at National Government Services, Inc. Attn: Medical Review-PMD Prior Authorization Request P.O. Box 7018, Indianapolis, IN 46207-7018 or fax to 317-841-4414.
PMD9C	The beneficiary does not reside in this jurisdiction. Please resubmit your request to Jurisdiction-C at CGS-DME Medical Review-Prior Authorization, P.O. Box 24890, Nashville, TN 37202-4890 or fax to 615-664-5960.
PMD9D	The beneficiary does not reside in this jurisdiction. Please resubmit your request to Jurisdiction-D at Noridian Healthcare Solutions, Attn: DME-MR PAR, PO BOX 6742, Fargo ND 58108-6742 or fax to (701) 277-7891.
PMD9E	The beneficiary resides in a state that is not included in the Power Mobility Device Demonstration. States included in the demonstration include California, Illinois, Michigan, New York, North Carolina, Florida, and Texas.
PMD9F	This is a duplicate prior authorization request.
PMD9G	An error occurred during the fax transmission of the prior authorization request and it is unable to be processed.
PMD9H	The documentation does not specify the base code of the power mobility device requested.
PMD9I	The base code of the power mobility device (PMD) requested is not a code that is specific to the PMD Demonstration Project.
PMD9J	The Power Mobility Demonstration applies to initial requests for specific base codes with the physician orders dated on or after September 1, 2012.
PMD9Z	The prior authorization request was flawed. Please see hard copy letter for details.