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SERIES H: AUDIOVISUAL AND MULTIMEDIA SYSTEMS

E-health multimedia services and applications – Interoperability compliance testing of personal health systems (HRN, PAN, LAN, TAN and WAN)

Conformance of ITU-T H.810 personal health system: Services interface Part 12:

Questionnaires: Health & Fitness Service

receiver

Recommendation ITU-T H.830.12



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Recommendation ITU-T H.830.12

Conformance of ITU-T H.810 personal health system: Services interface Part 12: Questionnaires: Health & Fitness Service receiver

Summary

Recommendation ITU-T H.830.12 provides a test suite structure (TSS) and the test purposes (TP) for Questionnaires through the Health & Fitness Service (HFS) receiver in the Services interface, based on the requirements defined in the Recommendations of the ITU-T H.810 sub-series, of which Recommendation ITU-T H.810 (2016) is the base Recommendation. The objective of this test specification is to provide a high probability of interoperability at this interface.

Recommendation ITU-T H.830.12 is the transposition of Continua Test Tool DG2016, Test Suite Structure & Test Purposes, Services Interface; Part 12: Questionnaires: HFS Receiver (Version 1.2, 2017-03-14).

This Recommendation includes an electronic attachment with the protocol implementation conformance statements (PICS) and the protocol implementation extra information for testing (PIXIT) required for the implementation of Annex A.

History

Edition	Recommendation	Approval	Study Group	Unique ID*
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Conformance testing, Continua Design Guidelines, e-health, Health & Fitness Service receiver, ITU-T H.810, personal connected health devices, Questionnaires, Services interface.

^{*} To access the Recommendation, type the URL http://handle.itu.int/ in the address field of your web browser, followed by the Recommendation's unique ID. For example, http://handle.itu.int/11.1002/1000/11 830-en.

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The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

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In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

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Electronic attachment: This Recommendation includes an electronic attachment with the protocol implementation conformance statements (PICS) and the protocol implementation extra information for testing (PIXIT) required for the implementation of Annex A.

Introduction

This Recommendation is a transposition of Continua Test Tool DG2016, Test Suite Structure & Test Purposes, Services Interface; Part 12: Questionnaires: HFS Receiver (Version 1.2, 2017-03-14), that was developed by the Personal Connected Health Alliance. The table below shows the revision history of this test specification; it may contain versions that existed before transposition.

Version	Date	Revision history
1.0	2015-07-01	Initial release for Test Tool DG2015 based on the requirements in [b-ITU-T H.810 (2015)]/[b-CDG 2015].
1.1	2016-09-20	Initial release for Test Tool DG2016. It implements changes according to [ITU-T H.810 (2016)]/[b-CDG 2016] (Iris + Errata) refreshments.
1.2	2017-03-14	Editorial: added insulin pump and continuous glucose monitor specializations to the TSS list in clause 6.

Recommendation ITU-T H.830.12

Conformance of ITU-T H.810 personal health system: Services interface Part 12: Questionnaires: Health & Fitness Service receiver

1 Scope

The scope of this Recommendation¹ is to provide a test suite structure (TSS) and the test purposes (TP) for the Services interface based on the requirements defined in Continua Specifications. The objective of this test specification is to provide a high probability of interoperability at this interface.

The TSS and TP for the Services interface have been divided into the parts specified below. This Recommendation covers Part 12.

- Part 1: Web services interoperability. Health & Fitness Service sender
- Part 2: Web services interoperability. Health & Fitness Service receiver
- Part 3: SOAP/ATNA. Health & Fitness Service sender
- Part 4: SOAP/ATNA. Health & Fitness Service receiver
- Part 5: PCD-01 HL7 messages. Health & Fitness Service sender
- Part 6: PCD-01 HL7 messages. Health & Fitness Service receiver
- Part 7: Consent Management. Health & Fitness Service sender
- Part 8: Consent Management. Health & Fitness Service receiver
- Part 9: hData Observation Upload. Health & Fitness Service sender
- Part 10: hData Observation Upload. Health & Fitness Service receiver
- Part 11: Questionnaires. Health & Fitness Service sender
- Part 12: Questionnaires. Health & Fitness Service receiver

2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

[ITU-T H.810 (2016)] Recommendation ITU-T H.810 (2016), *Interoperability design guidelines* for personal health systems.

[ITU-T H.811] Recommendation ITU-T H.811 (2016), Interoperability design guidelines

for personal health systems: Personal health devices interface.

[ITU-T H.812] Recommendation ITU-T H.812 (2016), Interoperability design guidelines

for personal health systems: Services interface: Common certified

capability class.

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This Recommendation includes an electronic attachment with the protocol implementation conformance statements (PICS) and the protocol implementation extra information for testing (PIXIT) required for the implementation of Annex A.

[ITU-T H.812.1]	Recommendation ITU-T H.812.1 (2016), Interoperability design guidelines for personal health systems: Services interface: Observation upload certified capability class.
[ITU-T H.812.2]	Recommendation ITU-T H.812.2 (2016), Interoperability design guidelines for personal health systems: Services interface: Questionnaires certified capability class.
[ITU-T H.812.3]	Recommendation ITU-T H.812.3 (2016), Interoperability design guidelines for personal health systems: Services interface: Capability exchange certified capability class.
[ITU-T H.812.4]	Recommendation ITU-T H.812.4 (2016), Interoperability design guidelines for personal health systems: Services interface: Authenticated persistent session certified capability class.
[ITU-T H.813]	Recommendation ITU-T H.813 (2016), <i>Interoperability design guidelines</i> for personal health systems: Healthcare information system interface.
[HL7 CDA QFD]	Health Level Seven (2014), <i>HL7 Implementation Guide for CDA</i> , <i>Release 2: Questionnaire Form Definition Document, Release 1.</i> http://www.hl7.org/dstucomments/showdetail.cfm?dstuid=116
[HL7 CDA QRD]	Health Level Seven (2014), <i>HL7 Implementation Guide for CDA</i> , <i>Release 2: Questionnaire Response Document</i> , <i>Release 1</i> . http://www.hl7.org/dstucomments/showdetail.cfm?dstuid=117
[HL7 V3 HRF]	Health Level Seven (2014), <i>HL7 Version 3 Specification: hData Record Format, Release 1.</i> http://www.hl7.org/documentcenter/private/standards/v3/V3_ITS_HDATA_RF_R1_2014JUN.pdf
[IETF RFC 3339]	IETF RFC 3339 (2002), <i>Date and Time on the Internet: Timestamps</i> . https://datatracker.ietf.org/doc/rfc3339

3 Definitions

3.1 Terms defined elsewhere

None.

3.2 Terms defined in this Recommendation

None.

4 Abbreviations and acronyms

This Recommendation uses the following abbreviations and acronyms:

AHD Application Hosting Device
ATS Abstract Test Suite

ATNA Audit Trail and Node Authentication

CDG Continua Design GuidelinesCGM Continuous Glucose Monitor

DUT Device Under Test

GUI Graphical User Interface
HFS Health & Fitness Service

HFSS Health & Fitness Service Sender

HFSR Health & Fitness Service Receiver

HL7 Health Level 7

HTTP Hypertext Transfer Protocol

HTTPS Hypertext Transfer Protocol Secure

INR International Normalized Ratio

IP Insulin Pump

IUT Implementation Under Test

MDS Medical Device System

NFC Near Field Communication

PCD Patient Care Device

PCT Protocol Conformance Testing

PCO Point of Control and Observation

PHD Personal Health Device

PHDC Personal Healthcare Device Class

PHG Personal Health Gateway

PICS Protocol Implementation Conformance Statement

PIXIT Protocol Implementation extra Information for Testing

S/MIME Secure/Multipurpose Internet Mail Extensions

SABTE Sleep Apnoea Breathing Therapy Equipment

SCR Static Conformance Review

SDP Service Discovery Protocol

SOAP Simple Object Access Protocol

TCRL Test Case Reference List

TCWG Test and Certification Working Group

TLS Transport Level Security

TP Test Purpose

TSS Test Suite Structure

USB Universal Serial Bus

URI Uniform Resource Identifier

WAN Wide Area Network

WDM Windows Driver Model

WS Web Service

WSDL Web Service Description Language

WSI Web Services Interoperability

XDR Cross-Enterprise Document Reliable Interchange

XML extensible Markup Language

5 Conventions

The key words "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "MAY", "MAY NOT" in this Recommendation are to be interpreted as in [b-ETSI SR 001 262].

- SHALL is equivalent to 'must' or 'it is required to'.
- SHALL NOT is equivalent to 'must not' or 'it is not allowed'.
- SHOULD is equivalent to 'it is recommended to'.
- SHOULD NOT is equivalent to 'it is not recommended to'.
- MAY is equivalent to 'is permitted'.
- MAY NOT is equivalent to 'it is not required that'.

NOTE – The above-mentioned key words are capitalized for illustrative purposes only and they do not appear capitalized within this Recommendation.

Reference is made in the ITU-T H.800-series of Recommendations to different versions of the Continua Design Guidelines (CDG) by a specific designation. The list of terms that may be used in this Recommendation is provided in Table 1.

Table 1 – List of designations associated with the various versions of the CDG

CDG release	Transposed as	Version	Description	Designation
2016 plus errata	[ITU-T H.810 (2016)]	6.1	Release 2016 plus errata noting all ratified bugs [b-CDG 2016].	-
2016	-	6.0	Release 2016 of the CDG including maintenance updates of the CDG 2015 and additional guidelines that cover new functionalities.	Iris
2015 plus errata	[b-ITU-T H.810 (2015)]	5.1	Release 2015 plus errata noting all ratified bugs [b-CDG 2015]. The 2013 edition of H.810 is split into eight parts in the H.810-series.	-
2015	-	5.0	Release 2015 of the CDG including maintenance updates of the CDG 2013 and additional guidelines that cover new functionalities.	Genome
2013 plus errata	[b-ITU-T H.810 (2013)]	4.1	Release 2013 plus errata noting all ratified bugs [b-CDG 2013].	_
2013	T	4.0	Release 2013 of the CDG including maintenance updates of the CDG 2012 and additional guidelines that cover new functionalities.	Endorphin
2012 plus errata	_	3.1	Release 2012 plus errata noting all ratified bugs [b-CDG 2012].	_
2012	-	3.0	Release 2012 of the CDG including maintenance updates of the CDG 2011 and additional guidelines that cover new functionalities.	Catalyst
2011 plus errata	_	2.1	CDG 2011 integrated with identified errata.	-
2011	-	2.0	Release 2011 of the CDG including maintenance updates of the CDG 2010 and additional guidelines that cover new	Adrenaline

Table 1 – List of designations associated with the various versions of the CDG

CDG release	Transposed as	Version	Description	Designation
			functionalities [b-CDG 2011].	
2010 plus errata	П	1.6	CDG 2010 integrated with identified errata	_
2010	İ	1.5	Release 2010 of the CDG with maintenance updates of the CDG Version 1 and additional guidelines that cover new functionalities [b-CDG 2010].	1.5
1.0	_	1.0	First released version of the CDG [b-CDG 1.0].	_

6 Test suite structure (TSS)

The test purposes (TPs) for the Services interface have been divided into the main subgroups specified below. Annex A describes the TPs for subgroups 2.7.1, 2.7.2 and 2.7.3 (shown in bold):

- Group 1: HFS sender (HFSS)
 - Group 1.1: Web services interoperability (WSI)
 - Subgroup 1.1.1: Basic profile (BP)
 - Subgroup 1.1.2: Basic security profile (BSP)
 - Subgroup 1.1.3: Reliable messaging (RM)
 - Group 1.2: Simple object access protocol (SOAP)
 - Subgroup 1.2.1: SOAP headers (HEAD)
 - Group 1.3: Audit trail and node authentication (ATNA)
 - Subgroup 1.3.1: General (GEN)
 - Subgroup 1.3.2: PCD-01 (PCD-01)
 - Subgroup 1.3.3: Consent Management (CM)
 - Group 1.4: PCD-01 HL7 messages (PCD-01-DATA)
 - Subgroup 1.4.1: General (GEN)
 - Subgroup 1.4.2: Design guidelines (DG)
 - Subgroup 1.4.3: Pulse oximeter (PO)
 - Subgroup 1.4.4: Blood pressure monitor (BPM)
 - Subgroup 1.4.5: Thermometer (TH)
 - Subgroup 1.4.6: Weighing scales (WEG)
 - Subgroup 1.4.7: Glucose meter (GL)
 - Subgroup 1.4.8: Cardiovascular fitness and activity monitor (CV)
 - Subgroup 1.4.9: Strength fitness equipment (ST)
 - Subgroup 1.4.10: Independent living activity hub (HUB)
 - Subgroup 1.4.11: Adherence monitor (AM)
 - Subgroup 1.4.12: Peak expiratory flow monitor (PF)
 - Subgroup 1.4.13: Body composition analyser (BCA)
 - Subgroup 1.4.14: Basic electrocardiograph (ECG)

- Subgroup 1.4.15: International normalized ratio (INR)
- Subgroup 1.4.16: Sleep apnoea breathing therapy equipment (SABTE)
- Subgroup 1.4.17: Insulin pump (IP)
- Subgroup 1.4.18: Continuous glucose monitor (CGM)
- Group 1.5: Consent Management (CM)
 - Subgroup 1.5.1: HFS XDR transaction (TRANS)
 - Subgroup 1.5.2: HFS metadata validation (META)
 - Subgroup 1.5.3: HFS consent directive validation (CDV)
- Group 1.6: hData Observation Upload (HDATA)
 - Subgroup 1.6.1: General (GEN)
- Group 1.7: Questionnaires (QUE)
 - Subgroup 1.7.1: General (GEN)
 - Subgroup 1.7.2: CDA validation (CDA)
- Group 2: HFS receiver (HFSR)
 - Group 2.1: Web service interoperability (WSI)
 - Subgroup 2.1.1: Basic profile (BP)
 - Subgroup 2.1.2: Basic security profile (BSP)
 - Subgroup 2.1.3: Reliable messaging (RM)
 - Group 2.2: SOAP (SOAP)
 - Subgroup 2.2.1: SOAP headers (HEAD)
 - Group 2.3: Audit (ATNA)
 - Subgroup 2.3.1: General (GEN)
 - Subgroup 2.3.2: PCD-01 (PCD-01)
 - Subgroup 2.3.3: Consent Management (CM)
 - Group 2.4: PCD-01 HL7 messages (PCD-01-DATA)
 - Subgroup 2.4.1: General (GEN)
 - Subgroup 2.4.2: Design guidelines (DG)
 - Subgroup 2.4.3: Pulse oximeter (PO)
 - Subgroup 2.4.4: Blood pressure monitor (BPM)
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 - Subgroup 2.4.13: Body composition analyser (BCA)
 - Subgroup 2.4.14: Basic electrocardiograph (ECG)
 - Subgroup 2.4.15: International normalized ratio (INR)
 - Subgroup 2.4.16: Sleep apnoea breathing therapy equipment (SABTE)

- Subgroup 2.4.17: Insulin pump (IP)
- Subgroup 2.4.18: Continuous glucose monitor (CGM)
- Group 2.5: Consent Management (CM)
 - Subgroup 2.5.1: HFS XDR transaction (TRANS)
 - Subgroup 2.5.2: HFS service validation (SER)
- Group 2.6: hData Observation Upload (HDATA)
 - Subgroup 2.6.1: General (GEN)
 - Subgroup 2.6.2: hData record format (HRF)
- Group 2.7: Questionnaires (QUE)
 - Subgroup 2.7.1: General (GEN)
 - Subgroup 2.7.2: CDA validation (CDA)
 - Subgroup 2.7.3: hData record format (HRF)

7 Electronic attachment

The protocol implementation conformance statements (PICS) and the protocol implementation extra information for testing (PIXIT) required for the implementation of Annex A can be downloaded from http://handle.itu.int/11.1002/2000/12067.

In the electronic attachment, letters "C" and "I" in the column labelled "Mandatory" are used to distinguish between "PICS" and "PIXIT" respectively during testing. If the cell is empty, the corresponding PICS is "independent". If the field contains a "C", the corresponding PICS is dependent on other PICS, and the logical expression is detailed in the "SCR_Expression" field. The static conformance review (SCR) is used in the test tool to assert whether the PICS selection is consistent.

Annex A

Test purposes

(This annex forms an integral part of this Recommendation.)

A.1 TP definition conventions

The test purposes (TPs) are defined according to the following rules:

- **TP Id**: This is a unique identifier (TP/<TT>/<DUT>/<GR>/<SGR>/<XX> - <NNN>). It is specified according to the naming convention defined below:

Each test procedure identifier is introduced by the prefix "TP".

- <TT>: This is the test tool that will be used in the test case.
 - HFS: Health & Fitness Services Interface
- <DUT>: This is the device under test.
 - SEN: HFS sender
 - REC: HFS receiver
- <GR>: This identifies a group of test cases.
- <SGR>: This identifies a subgroup of test cases.
- <XX>: This identifies the type of testing.
 - BV: Valid behaviour test
 - BI: Invalid behaviour test
- <NNN>: This is a sequential number that identifies the test procedure.
- TP label: This is the TP's title.
- **Coverage**: This contains the specification reference and clause to be checked by the TP.
 - Spec: This indicates the earliest version of the specification from which the testable items to be checked by the TP were included.
 - Testable item: This contains testable items to be checked by the TP.
- **Test purpose**: This is a description of the requirements to be tested.
- Applicability: This contains the PICS items that define if a test case is applicable or not for a specific device. When a TP contains an "ALL" in this field it means that it applies to the device under test within that scope of the test (specialization, transport used, etc.).
- Other PICS: This contains additional PICS items (apart from the PICS specified in the Applicability row) which are used within the test case implementation and can modify the final verdict. When this row is empty, it means that only the PICS specified in the Applicability row are used within the test case implementation
- Initial condition: This indicates the state to which the DUT needs to be moved at the beginning of TC execution.
- **Test procedure**: This describes the steps to be followed in order to execute the test case.
- Pass/Fail criteria: This provides criteria to decide whether the DUT passes or fails the test case.

A.2 Subgroup 2.7.1: General (GEN)

A.2 Sub	ogroup 2.	<u> 7.1: General (GEN</u>)			
TP ld		TP/HFS/REC/QUE/GEN/BV-000				
TP label	I	Questionnaire retrieval	. HFS Recei	ver		
Coverage	Spec	[ITU-T H.812]				
	Testable items	RESTSec 7;M	RE	STSec 8;M		CommonReq 5;M
	Spec	[ITU-T H.812.2]				
	Testable items	Question 3;M	Qu	estion 4;M		Question 5;M
Test purpose		Check that: The simulated HFS appropriate questionnaires and an				
Applicability		C_REC_000 AND C_REC_GEN_004 AND C_REC_GEN_006				
Other PICS		C_REC_GEN_005				
Initial conditi	on	The HFS receiver under test provides a list of to-be-completed questionnaires with at least one entry containing a link to an actual to-be-completed questionnaire document.				
Test procedure		 The simulated HFS application uses an HTTP GET request without query parameters at the URL representing the patient's questionnaire hData root section path (continua/questionnaires) using a secure hData connection in order to retrieve an atom feed containing a list of to-be-completed questionnaire documents containing at least one document. 				
		 The simulated HFS application retrieves the actual to-be-completed questionnaire document using the value of the "link" element contained in the atom feed retrieved in step 1. "Link" element may be a relative path to baseURL or a full path. 				
Pass/Fail criteria		The HFS receiver under test supports capability exchange as specified in [ITU-T H.812.3].				
		The HFS receiver under test provides a list of to-be-completed questionnaires with at least one entry.				
		The atom entry element of the questionnaire list shall contain the dueDate extension element in the Continua namespace, the content of which shall conform to the "date-time" production in [IETF RFC 3339].				
		The HFS receiver under test allows the retrieval of the actual to-be-completed questionnaire document using the content of the "link" element in the atom feed.				
Notes						

TP ld		TP/HFS/REC/QUE/GEN/BV-001			
TP label Questionnaire response submitting. HFS Receiver.					
Coverage	Spec	[ITU-T H.812]	[ITU-T H.812]		
	Testable items	RESTSec 7;M	CommonReq 5;M		
	Spec	[ITU-T H.812.2]			
	Testable items	Question 6;M	Question 9;M	Question 13;M	

Test purpose	Check that:
	The simulated HFS application posts a questionnaire response document to the HFS receiver under test.
Applicability	C_REC_000 AND C_REC_GEN_004 AND C_REC_GEN_006
Other PICS	C_REC_GEN_005
Initial condition	The HFS receiver under test is ready to receive a questionnaire response document from the simulated HFS sender.
Test procedure	 The simulated HFS application uses HTTP POST with the following URL for posting a questionnaire response document to the HFS receiver under test: baseURL/continua/questionnaireResponse using a secure hData connection.
Pass/Fail criteria	The HFS receiver under test supports capability exchange as specified in [ITU-T H.812.3].
	 Questionnaire Enabled HFS Device validates the received document and sends the HTTP 201 (Created) as a response.
Notes	

TP Id		TP/HFS/REC/QUE/GEN/BV-002				
TP label		Questionnaire HTTP responses. HFS Receiver.				
Coverage Spec		[ITU-T H.812]		,		
	Testable items	RESTSec 7;M	RESTSec 8;M	CommonReq 5;M		
	Spec	[ITU-T H.812.2]		,		
	Testable items	Question 14;M	Question15;M	Question 16;M		
Test purpose		Check that: The HFS receiver under test returns appropriate HTTP return codes to several HTTP operations.				
Applicability	/	C_REC_000 AND C_REC_GEN_004 AND C_REC_GEN_006				
Other PICS		C_REC_GEN_005				
Initial condi	tion	The Questionnaire Enabled HFS receiver under test is ready to receive HTTP operations.				
Test proced	ure	The Questionnaire Enabled HFS receiver under test receives an HTTP POST request on questionnaire section path from the simulated HFS application.				
		2. The Questionnaire Enabled HFS receiver under test receives an HTTP PUT request on questionnaire section path.				
		3. The Questionnaire Enabled HFS receiver under test receives an HTTP PUT request on questionnaire response section path.				
		4. The Questionnaire Enabled HFS receiver under test receives an HTTP DELETE request on questionnaire section path.				
		5. The Questionnaire Enabled HFS receiver under test receives an HTTP DELETE request on questionnaire response section path.				
Pass/Fail criteria		The HFS receiver under test supports capability exchange as specified in [ITU-T H.812.3].				

	 The Questionnaire Enabled HFS receiver under test does not support the creation of new questionnaire record via the hData interface and returns HTTP 405 Method Not Allowed as a response to HTTP POST request on questionnaire section path. The Questionnaire Enabled HFS receiver under test does not support the modification of an existing questionnaire or questionnaire response record and shall return HTTP 405 Method Not Allowed as a response to HTTP PUT request on questionnaire and questionnaire response section paths. The Questionnaire Enabled HFS receiver under test does not support the deletion of an
	existing questionnaire or questionnaire response record and shall return HTTP 405 Method Not Allowed as a response to HTTP DELETE request on questionnaire and questionnaire response section paths.
Notes	

TP ld		TP/HFS/REC/QUE/GEN/BV-003				
TP label		Questionnaire response retrieval. HFS Receiver.				
Coverage	Spec	[ITU-T H.812]				
	Testable items	RESTSec 7;M	RESTSec 8;M	CommonReq 5;M		
Spec		[ITU-T H.812.2]				
	Testable items	Question 7;M	Question 8;M			
Test purpose		Check that: The simulated HFS application retrieves from the SUT a list of questionnaire responses and an actual questionnaire response document.				
Applicability		C_REC_000 AND C_REC_GEN_004 AND C_REC_GEN_006				
Other PICS		C_REC_GEN_005				
Initial condition		The HFS receiver under test provides a list of questionnaire responses with at least one entry containing a link to an actual questionnaire response document.				
Test procedure		The simulated HFS application uses an HTTP GET request without query parameters at the URL representing the patient's questionnaire hData root section path (continua/questionnaires) using a secure hData connection in order to retrieve an atom feed containing a list of to-be-completed questionnaire documents containing at least one document.				
		 The simulated HFS application retrieves the actual to-be-completed questionnaire document using the value of the "link" element contained in the atom feed retrieved in step 1. "Link" element may be a relative path to baseURL or a full path. 				
Pass/Fail criteria		The HFS receiver under test supports capability exchange as specified in [ITU-T H.812.3].				
		The HFS receiver under test provides a list of to-be-completed questionnaires with at least one entry.				
		The HFS receiver under test allows the retrieval of the actual to-be-completed questionnaire document using the content of the "link" element in the atom feed.				
Notes						

A.3 Subgroup 2.7.2: CDA validation (CDA)

TP ld		TP/HFS/REC/QUE/CDA	VBV-000		
TP label		Questionnaire CDA syntactic and semantic validation. HFS Receiver			
Coverage	Spec	[HL7 CDA QFD]			
	Testable items	CONF-Q-1; M	CONF-Q-2;R	CONF-Q-3;M	
		CONF-Q-4;M	CONF-Q-5;M	CONF-Q-6;M	
		CONF-Q-7;M	CONF-Q-8;M	CONF-Q-10;M	
		CONF-Q-13; R	CONF-Q-14;M	CONF-Q-15;M	
		CONF-Q-16; M	CONF-Q-17;M	CONF-Q-18 ;M	
		CONF-Q-19;M	CONF-Q-20;M	CONF-Q-21;M	
		CONF-Q-22;M	CONF-Q-23 ;M	CONF-Q-24;M	
		CONF-Q-25;M	CONF-Q-26;M	CONF-Q-27;M	
		CONF-Q-28 ;M	CONF-Q-29;M	CONF-Q-30;R	
		CONF-Q-31;M	CONF-Q-32;R	CONF-Q-33;M	
		CONF-Q-34;M	CONF-Q-35;M	CONF-Q-36;M	
		CONF-Q-37;M	CONF-Q-38 ;M	CONF-Q-39;M	
		CONF-Q-40;M	CONF-Q-41;R	CONF-Q-42;M	
		CONF-Q-43;M	CONF-Q-44;M	CONF-Q-45;M	
		CONF-Q-46;M	CONF-Q-47;M	CONF-Q-48 ;M	
		CONF-Q-49;M	CONF-Q-50;M	CONF-Q-51;M	
		CONF-Q-52;M	CONF-Q-53 ;M	CONF-Q-54;M	
		CONF-Q-55;R	CONF-Q-56;M	CONF-Q-57;M	
		CONF-Q-58 ;M	CONF-Q-59;M	CONF-Q-60;M	
		CONF-Q-61;M	CONF-Q-62;M	CONF-Q-63 ;R	
		CONF-Q-64;M	CONF-Q-65;R	CONF-Q-66;M	
		CONF-Q-67;M	CONF-Q-68 ;M	CONF-Q-69;M	
		CONF-Q-70;M	CONF-Q-71;M	CONF-Q-72;M	
		CONF-Q-73 ;M	CONF-Q-74;R	CONF-Q-75;M	
		CONF-Q-76;M	CONF-Q-77;O	CONF-Q-78 ;M	
		CONF-Q-79;M	CONF-Q-80;M	CONF-Q-81 ;M	
		CONF-Q-82;M	CONF-Q-83 ;M	CONF-Q-84;M	
		CONF-Q-85;M	CONF-Q-86;O	CONF-Q-87;M	
		CONF-Q-88 ;M	CONF-Q-89;M	CONF-Q-90 ;M	

CONF-Q-91;M	CONF-Q-92;O	CONF-Q-93 ;M
CONF-Q-94;M	CONF-Q-95;M	CONF-Q-96 ;M
CONF-Q-97;M	CONF-Q-98 ;M	CONF-Q-99;M
CONF-Q-100;M	CONF-Q-101;M	CONF-Q-102;M
CONF-Q-103 ;M	CONF-Q-104;M	CONF-Q-105 ;M
CONF-Q-106;M	CONF-Q-107;M	CONF-Q-108 ;M
CONF-Q-109;M	CONF-Q-110;R	CONF-Q-111 ;M
CONF-Q-112;M	CONF-Q-113 ;M	CONF-Q-114;M
CONF-Q-115;O	CONF-Q-116; M	CONF-Q-117;M
CONF-Q-118;M	CONF-Q-119; M	CONF-Q-120 ;M
CONF-Q-121;M	CONF-Q-122;M	CONF-Q-123 ;M
CONF-Q-124;M	CONF-Q-125;M	CONF-Q-126 ;M
CONF-Q-127;M	CONF-Q-128;M	CONF-Q-129 ;M
CONF-Q-130;M	CONF-Q-131;M	CONF-Q-132 ;M
CONF-Q-133;M	CONF-Q-134;M	CONF-Q-135 ;M
CONF-Q-136;M	CONF-Q-137;R	CONF-Q-138 ;R
CONF-Q-139;M	CONF-Q-140,M	CONF-Q-141 ;M
CONF-Q-142;M	CONF-Q-143;M	CONF-Q-144 ;M
CONF-Q-145;M	CONF-Q-146;M	CONF-Q-147 ;M
CONF-Q-148;R	CONF-Q-149;M	CONF-Q-150;M
CONF-Q-151;M	CONF-Q-152;M	CONF-Q-153;M
CONF-Q-154;M	CONF-Q-155;M	CONF-Q-156;M
CONF-Q-157;M	CONF-Q-158;R	CONF-Q-159;O
CONF-Q-160;M	CONF-Q-161;M	CONF-Q-162;M
CONF-Q-163;M	CONF-Q-164;M	CONF-Q-165;M
CONF-Q-166;R	CONF-Q-167;R	CONF-Q-168;M
CONF-Q-169;M	CONF-Q-70;M	CONF-Q-171;M
CONF-Q-172;M	CONF-Q-173;M	CONF-Q-174;M
CONF-Q-175;M	CONF-Q-176,M	CONF-Q-177;R
CONF-Q-178;M	CONF-Q-179;M	CONF-Q-180;M
CONF-Q-181;M	CONF-Q-182;M	CONF-Q-183;R
CONF-Q-184;M	CONF-Q-185;M	CONF-Q-186;M

CONF-Q-187;R	CONF-Q-188;M	CONF-Q-189;M
CONF-Q-190;R	CONF-Q-191;M	CONF-Q-192;M
CONF-Q-193;R	CONF-Q-194;M	CONF-Q-195;M
CONF-Q-196;R	CONF-Q-197;M	CONF-Q-198;M
CONF-Q-199;M	CONF-Q-200;R	CONF-Q-201;M
CONF-Q-202;M	CONF-Q-203;M	CONF-Q-204;M
CONF-Q-205;M	CONF-Q-206;R	CONF-Q-207;O
CONF-Q-208;M	CONF-Q-209;M	CONF-Q-210;R
CONF-Q-211;M	CONF-Q-212;M	CONF-Q-213;R
CONF-Q-214;M	CONF-Q-215;M	CONF-Q-216;M
CONF-Q-217;M	CONF-Q-218;M	CONF-Q-219;M
CONF-Q-220;M	CONF-Q-221;M	CONF-Q-222;M
CONF-Q-223;M	CONF-Q-224;M	CONF-Q-225;M
CONF-Q-226;M	CONF-Q-227;M	CONF-Q-228;M
CONF-Q-229;M	CONF-Q-230;M	CONF-Q-231;M
CONF-Q-232;M	CONF-Q-233;O	CONF-Q-234;R
CONF-Q-235;M	CONF-Q-236;M	CONF-Q-237;M
CONF-Q-238;M	CONF-Q-239;M	CONF-Q-240;M
CONF-Q-241;M	CONF-Q-242;R	CONF-Q-243;M
CONF-Q-244;M	CONF-Q-245;M	CONF-Q-246;M
CONF-Q-247;M	CONF-Q-248;M	CONF-Q-249;M
CONF-Q-250;M	CONF-Q-251;M	CONF-Q-252;M
CONF-Q-253;M	CONF-Q-254;R	CONF-Q-255;M
CONF-Q-256;M	CONF-Q-257;M	CONF-Q-258;M
CONF-Q-259;M	CONF-Q-260;R	CONF-Q-261;M
CONF-Q-262;M	CONF-Q-263;R	CONF-Q-264;M
CONF-Q-265;M	CONF-Q-266;M	
Chaple that		

Test purpose

Check that:

SUT has submitted a syntactically correct questionnaire document , so that:

ClinicalDocument element SHALL contain exactly one [1..1] realmCode.

[AND]

ClinicalDocument element SHOULD be selected from HL7 ValueSet BindingRealm [2.16.840.1.113883.1.11.20355] from codesystem hl7Realm [2.16.840.1.113883.5.1124] STATIC 2010-11-11.

ClinicalDocument element SHALL contain exactly one [1..1] typeld.

[AND]

ClinicalDocument/typeId element SHALL contain exactly one [1..1] @root="2.16.840.1.113883.1.3".

[AND]

ClinicalDocument/typeId element SHALL contain exactly one [1..1] @extension="POCD_HD000040".

[AND]

ClinicalDocument SHALL contain at least one [1..*] header-level templateld.

[AND]

ClinicalDocument/templateId SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32".

[AND]

ClinicalDocument SHALL contain exactly one [1..1] id.

[AND]

ClinicalDocument SHALL contain exactly one [1..1] code.

[AND]

ClinicalDocument SHALL contain exactly one [1..1] title.

[AND]

ClinicalDocument SHALL contain exactly one [1..1] sdtc:statusCode.

[AND]

ClinicalDocument/sdtc:statusCode element SHALL contain exactly one [1..1] @code="NEW" (CodeSystem: ActStatus 2.16.840.1.113883.5.14)

[AND]

ClinicalDocument SHALL contain exactly one [1..1] effectiveTime.

[AND]

ClinicalDocument SHALL contain exactly one [1..1] confidentialityCode, which SHALL be selected from ValueSet HL7 BasicConfidentialityKind 2.16.840.1.113883.1.11.16926 STATIC 2010-04-21.

[AND]

ClinicalDocument SHALL contain exactly one [1..1] languageCode, which SHALL be selected from ValueSet Language 2.16.840.1.113883.1.11.11526 DYNAMIC.

[AND]

ClinicalDocument SHALL contain exactly one [1..1] recordTarget.

[AND]

Such recordTargets SHALL contain exactly one [1..1] patientRole.

[AND]

This patientRole SHALL contain at least one [1..*] id.

[AND]

The value of the ClinicalDocument/recordTarget/patientRole/id/@NullFlavor" element SHALL be "NI" "No Information" 2.16.840.1.113883.5.1008 NullFlavor STATIC.

[AND]

ClinicalDocument SHALL contain at least one [1..*] author.

[AND]

Such authors SHALL contain exactly one [1..1] time.

[AND]

Such authors SHALL contain exactly one [1..1] assignedAuthor.

Author/assignedAuthor SHALL contain exactly one [1..1] id.

[AND]

Author/assignedAuthor SHALL contain at least one [1..*] addr.

[AND]

Author/assignedAuthor SHALL contain at least one [1..*] telecom.

[AND]

ClinicalDocument/author/assignedAuthor element SHALL be exactly one assignedAuthor/assignedPerson or exactly one assignedAuthor/assignedAuthoringDevice.

[AND]

Author/assignedAuthor SHOULD contain zero or one [0..1] assignedPerson.

[AND]

Author/assignedAuthor/assignedPerson if present, SHALL contain at least one [1..*] name.

[AND]

Author/assignedAuthor SHOULD contain zero or one [0..1] assignedAuthoringDevice.

[AND]

Author/assignedAuthoringDevice, if present, SHALL contain exactly one [1..1] manufacturerModelName.

[AND

Author/assignedAuthor/assignedAuthoringDevice, if present, SHALL contain exactly one [1..1] softwareName.

[AND]

ClinicalDocument/author/assignedAuthor element SHALL contain exactly one [1..1] representedOrganization.

[AND]

ClinicalDocument/author/assignedAuthor element If assignedAuthor has an associated representedOrganization and no assignedPerson or assignedAuthoringDevice, then the value for "ClinicalDocument/author/assignedAuthor/id/@NullFlavor" SHALL be "NA" "Not applicable" 2.16.840.1.113883.5.1008 NullFlavor STATIC.

[AND]

ClinicalDocument element SHALL contain exactly one [1..1] custodian.

[AND]

ClinicalDocument/custodian element SHALL contain exactly one [1..1] assignedCustodian.

[AND]

ClinicalDocument/custodian/assignedCustodian SHALL contain exactly one [1..1] representedCustodianOrganization.

[AND]

 $\label{linicalDocument} Clinical Document/custodian/assigned Custodian/represented Custodian Organization SHALL contain at least one [1..*] id.$

[AND]

 $\label{linicalDocument/custodian/assignedCustodian/representedCustodianOrganization\ SHOULD\ contain\ exactly\ one\ [1..1]\ name.$

[AND]

ClinicalDocument/custodian/assignedCustodian/representedCustodianOrganization SHALL contain exactly one [1..1] telecom.

[AND]

ClinicalDocument/custodian/assignedCustodian/representedCustodianOrganization SHALL contain exactly one [1..1] addr.

ClinicalDocument SHALL conform to the Universal Realm Questionnaire Form Definition Document Header template (templateld: 2.16.840.1.113883.10.20.32).

[AND]

ClinicalDocument SHALL contain exactly one [1..1] templateld such that it.

ClinicalDocument SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.1.1".

[AND]

ClinicalDocument SHALL contain exactly one [1..1] component.

[AND]

ClinicalDocument/component SHALL contain exactly one [1..1] structuredBody.

[AND]

ClinicalDocument/component/structureBody SHALL contain at least one [1..*] component

[AND]

ClinicalDocument/component/structureBody/component SHALL contain exactly one [1..1] Questionnaire Form Definition Section template (templateId:

2.16.840.1.113883.10.20.32.2.1).

[AND]

ClinicalDocument/component/structureBody/component SHALL contain exactly one [1..1] Copy Right Section template (templateId: 2.16.840.1.113883.10.20.32.2.2).

[AND]

This section SHALL contain exactly one [1..1] templateld.

[AND]

This templateld SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.2.1".

[AND]

This section SHALL contain exactly one [1..1] code.

[AND]

This section SHOULD contain zero or one [0..1] title.

[AND]

This section SHALL contain exactly one [1..1] text.

[AND]

This section SHOULD contain zero or one [0..1] languageCode which SHALL be selected from ValueSet Language 2.16.840.1.113883.1.11.11526 DYNAMIC.

[AND]

This section SHALL contain at least one [1..*] entry

[AND]

This entry SHALL contain exactly one [1..1] @typeCode="DRIV".

[AND]

This entry SHALL contain exactly one [1..1] Questions Organizer template(templateld: 2.16.840.1.113883.10.20.32.4.1).

[AND]

This section SHALL contain exactly one [1..1] templateld.

[AND]

This templateld SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.2.2".

[AND]

This section SHOULD contain zero or one [0..1] title.

This section SHALL contain exactly one [1..1] text.

[AND]

This section SHOULD contain zero or one [0..1] languageCode which SHALL be selected from ValueSet Language 2.16.840.1.113883.1.11.11526 DYNAMIC.

[AND]

This section SHALL contain at least one [1..*] entry.

[AND]

This entry SHALL contain exactly one [1..1] @typeCode="DRIV".

[AND]

This entry SHALL contain exactly one [1..1] Copy Right Pattern Observation template (templateld: 2.16.840.1.113883.10.20.32.4.21).

[AND]

This section SHALL contain exactly one [1..1] @classCode (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC).

[AND]

This section SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC).

[AND]

This section SHALL contain exactly one [1..1] templateld.

[AND]

This templateId SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.1".

[AND]

This section SHALL contain at least one [1..*] id.

[AND]

This section SHOULD contain zero or one [0..1] code.

[AND]

This section SHALL contain exactly one [1..1] statusCode.

[AND]

This statusCode SHALL contain exactly one [1..1] @code="COMPLETED" (CodeSystem: ActStatus 2.16.840.1.113883.5.14) .

[AND]

This section MAY contain zero or more [0..*] Precondition Pattern templates (templateId 2.16.840.1.113883.10.20.32.4.4) or sdtc:precondition(templateId 2.16.840.1.113883.10.20.32.4.12) .

[AND]

This section SHALL contain at least one [1..*] component.

[AND]

This component SHALL contain exactly one [1..1] squenceNumber.

[AND]

This component SHALL contain exactly one [1..1] of the following templates:

- Numeric Question Pattern Observation template (templateld: 2.16.840.1.113883.10.20.32.4.7).
- Multiple Choice Question Pattern Observation template (templateld: 2.16.840.1.113883.10.20.32.4.8).
- Multiple Choice Question Pattern Observation template (templateld: 2.16.840.1.113883.10.20.32.4.8).
- Analog Slider Question Pattern Observation template (templateld: 2.16.840.1.113883.10.20.32.4.10).

- Discrete Slider Question Pattern Observation template (templateld: 2.16.840.1.113883.10.20.32.4.11).

[AND]

This section SHALL contain exactly one [1..1] @classCode (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC).

[AND]

This section SHALL contain exactly one [1..1] @moodCode="DEF" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC).

[AND]

This templateld SHALL contain exactly one [1..1] templateld.

[AND]

This templateld SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.2".

[AND]

ClinicalDocument SHALL contain exactly one [1..1] value.

[AND]

This section SHALL contain exactly one [1..1] templateld.

[AND]

This templateld SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.3".

[AND]

This section SHALL contain exactly one [1..1] @classCode (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC).

[AND]

This section SHALL contain exactly one [1..1] @moodCode="EVN.CRT" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC).

[AND]

This section SHALL contain exactly one [1..1] code.

[AND]

This section SHALL contain exactly one [1..1] value.

[AND]

This section SHALL contain exactly one [1..1] @typeCode="PRCN".

[AND]

This section SHALL contain exactly one [1..1] templateld.

[AND]

This templated SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.4".

[AND]

This section SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.4".

[AND]

This section SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC).

[AND]

This section SHALL contain exactly one [1..1] @moodCode="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC).

This section SHALL contain exactly one [1..1] templateld such that it.

This templateld SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.19".

[AND]

This section SHALL contain exactly one [1..1] code.

This code SHALL contain exactly one [1..1] @code="48767-8"

[AND]

This code SHALL contain exactly one [1..1] (@CodeSystem: 2.16.840.1.113883.6.1".

[AND]

This section SHALL contain [1..1] value.

[AND]

This value SHALL contain [1..1] @xsi:type="ST".

[AND]

This section SHOULD contain zero or one [0..1] languageCode which SHALL be selected from ValueSet Language 2.16.840.1.113883.1.11.11526 DYNAMIC.

[AND]

This section SHALL contain exactly one [1..1] @typeCode="REFV"

(CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002).

[AND]

This section SHALL contain exactly one [1..1] templateld.

[AND]

This templateld SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.5".

[AND]

The referenceRange SHALL contain exactly one [1..1] observationRange.

[AND]

The referenceRange MAY contain zero or one [0..1] text.

[AND]

The referenceRange SHALL contain exactly one [1..1] value such that it.

[AND]

This value SHALL contain exactly one [1..1] @xsi:type.

[AND]

This value SHALL contain exactly one [1..1] low.

[AND]

This value SHALL contain exactly one [1..1] high.

[AND]

This section SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC).

[AND]

This section SHALL contain exactly one [1..1] @moodCode="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC).

[AND]

This section SHALL contain exactly one [1..1] templateld.

[AND]

This templateld SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.20"

[AND]

This section SHALL contain exactly one [1..1] code.

[AND]

This code SHALL contain exactly one [1..1] @code="74467-2" Number of Options.

This code SHALL contain exactly one [1..1] @CodeSystem:="2.16.840.1.113883.6.1".

[AND]

This section SHALL contain exactly one [1..1] value.

[AND]

This value SHALL contain exactly one [1..1] @xsi:type="IVL_INT.

[AND]

This value SHALL contain exactly one [1..1] low.

[AND]

This value SHALL contain exactly one [1..1] high.

[AND]

This section SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC).

[AND]

This section SHALL contain exactly one [1..1] @moodCode="DEF" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC).

[AND]

This section SHALL contain exactly one [1..1] templateld.

[AND]

This templateld SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.6".

[AND]

This section SHALL contain exactly one [1..1] code.

[AND]

This section SHALL contain exactly one [1..1] value.

[AND]

This section SHOULD contain zero or one [0..1] languageCode which SHALL be selected from ValueSet Language 2.16.840.1.113883.1.11.11526 DYNAMIC.

[AND]

This section SHOULD contain zero or more [0..*] Precondition Pattern template(templateId 2.16.840.1.113883.10.20.32.4.4) or sdtc:precondition(templateId 2.16.840.1.113883.10.20.32.4.12).

[AND]

This section SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC).

[AND]

This section SHALL contain exactly one [1..1] @moodCode="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC).

[AND]

This section SHALL contain exactly one [1..1] templateld.

[AND]

This templateld SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.21.

[AND]

This section SHALL contain exactly one [1..1] code.

[AND]

This code SHALL contain exactly one [1..1] @code="COPY",

[AND]

This code SHALL contain exactly one [1..1] @CodeSystem="2.16.840.1.113883.5.4".

This section SHALL contain [1..1] value.

This value SHALL contain [1..1] @xsi:type="ST".

[AND]

This section SHOULD contain zero or one [0..1] languageCode which SHALL be selected from ValueSet Language 2.16.840.1.113883.1.11.11526 DYNAMIC.

[AND]

This section SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC).

[AND]

This section SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC).

[AND]

This section SHALL contain exactly one [1..1] templateld.

[AND]

This templateId SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.7".

[AND]

This section SHALL contain at least one [1..*] id.

[AND]

This section SHALL contain exactly one [1..1] code.

[AND]

This code SHALL contain exactly one [1..1] @code.

[AND]

This code SHALL contain exactly one [1..1] @codeSystem.

[AND]

This code SHALL contain exactly one [1..1] originalText.

[AND]

This section SHOULD contain zero or one [0..1] languageCode which SHALL be selected from ValueSet Language 2.16.840.1.113883.1.11.11526 DYNAMIC.

[AND]

This section MAY contain zero or one [0..1] entryRelationship .

[AND]

The entryRelationship, if present, SHALL contain exactly one [1..1] @typeCode="SUBJ" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002)

[AND]

This entryRelationship SHALL contain exactly one [1..1] Question Help Text Pattern Observation template (templateId 2.16.840.1.113883.10.20.32.4.19).

[AND

This section SHOULD contain zero or one [0..1] entryRelationship.

[AND]

The entryRelationship, if present, SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002).

[AND]

This entryRelationship SHALL conform to the Question Media Pattern template (templateId 2.16.840.1.113883.10.20.32.4.2).

[AND]

This entryRelationship SHALL conform to the Question Feedback Pattern Observation

template (templateld 2.16.840.1.113883.10.20.32.4.6).

[AND]

This section SHOULD contain zero or more [0..*] Precondition Pattern templates (templateId 2.16.840.1.113883.10.20.32.4.4) or sdtc:precondition(templateId 2.16.840.1.113883.10.20.32.4.12).

[AND]

This section SHOULD contain zero or more [0..*] Question Reference Range Pattern template (templateId 2.16.840.1.113883.10.20.32.4.5).

[AND]

This section SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC).

[AND]

This section SHALL contain exactly one [1..1] @moodCode="DEF" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC).

[AND]

This section SHALL contain exactly one [1..1] templateld.

[AND]

This templateld SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.8".

[AND]

This section SHALL contain at least one [1..*] id.

[AND]

This section SHALL contain exactly one [1..1] code.

[AND]

This code SHALL contain exactly one [1..1] @code.

[AND]

This code SHALL contain exactly one [1..1] @code.

[AND]

This code SHALL contain exactly one [1..1] originalText.

[AND]

This section SHOULD contain zero or one [0..1] languageCode which SHALL be selected from ValueSet Language 2.16.840.1.113883.1.11.11526 DYNAMIC.

[AND]

This section SHALL contain at least two or more [2..*] value.

[AND]

This value SHALL contain exactly one [1..1] @xsi:type="CE".

[AND]

This value SHALL contain exactly one [1..1] @code.

[AND]

This value SHALL contain exactly one [1..1] @CodeSystem.

[AND]

This value SHALL contain exactly one [1..1] @displayName.

[AND]

This section SHOULD contain zero or many [0..*] entryRelationship.

[AND]

This entryRelationship SHALL contain exactly one [1..1] @typeCode="SUBJ" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002),

This entryRelationship SHALL contain exactly one [1..1] Question Help Text Pattern Observation template (templateId 2.16.840.1.113883.10.20.32.4.19).

[AND]

This entryRelationship SHALL contain exactly one [1..1] Question Options Pattern Observation template (templateId 2.16.840.1.113883.10.20.32.4.20).

[AND]

This section SHOULD contain zero or one [0..1] entryRelationship.

[AND

The entryRelationship , if present, SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002),

[AND]

This section SHALL conform to the Question Media Pattern template (templateId 2.16.840.1.113883.10.20.32.4.2).

[AND]

This section SHOULD contain zero or one [0..*] entryRelationship.

[AND]

The entryRelationship , if present, SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002).

[AND]

This entryRelationship SHALL conform to the Question Feedback Pattern Observation template (templateId 2.16.840.1.113883.10.20.32.4.6).

[AND]

This section SHOULD contain zero or one [0..1] entryRelationship.

[AND]

The entryRelationship, if present, SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002).

[AND]

This entryRelationship SHALL conform to the Text Question Pattern Observation template (templateId 2.16.840.1.113883.10.20.32.4.9).

[AND]

This section SHOULD contain zero or more [0..*] Precondition Pattern templates (templateId 2.16.840.1.113883.10.20.32.4.4) or sdtc:precondition(templateId 2.16.840.1.113883.10.20.32.4.12) .

[AND]

This section SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC).

[AND]

This section SHALL contain exactly one [1..1] @moodCode="DEF" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC).

[AND]

This section SHALL contain exactly one [1..1] templateld.

[AND]

This templated SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.6".

[AND]

This section SHALL contain at least one [1..*] id.

[AND]

This section SHALL contain exactly one [1..1] code.

This code SHALL contain exactly one [1..1] @code.

[AND]

This code SHALL contain exactly one [1..1] @codeSystem.

[AND]

This code SHALL contain exactly one [1..1] @originalText.

[AND]

This section SHOULD contain zero or one [0..1] languageCode which SHALL be selected from ValueSet Language 2.16.840.1.113883.1.11.11526 DYNAMIC.

[AND

This section MAY contain zero or one [0..1] entryRelationship.

[AND]

The entryRelationship, if present, SHALL contain exactly one [1..1] @typeCode="SUBJ" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002).

[AND]

This entryRelationship SHALL contain exactly one [1..1] Question Help Text Pattern Observation template (templateId 2.16.840.1.113883.10.20.32.4.19).

[AND]

This section SHOULD contain zero or one [0..1] entryRelationship.

[AND]

The entryRelationship, if present, SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002).

[AND]

This entryRelationship SHALL conform to the Question Media Pattern template (templateId 2.16.840.1.113883.10.20.32.4.2).

[AND]

This section SHOULD contain zero or more [0..*] Precondition Pattern templates (templateId 2.16.840.1.113883.10.20.32.4.4) or sdtc:precondition(templateId 2.16.840.1.113883.10.20.32.4.12).

[AND]

This section SHALL conform to the Numeric Question Pattern Observation template (templateId 2.16.840.1.113883.10.20.32.4.7).

[AND]

This section SHALL NOT contain Question Reference Range Pattern template (templateId 2.16.840.1.113883.10.20.32.4.5).

[AND]

This section SHALL contain exactly one [1..1] templateld.

[AND]

This templated SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.10".

[AND]

This section SHALL contain exactly one [1..1] referenceRange.

[AND]

This referenceRange SHALL contain exactly one [1..1] @typeCode="REFV" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002).

[AND]

This referenceRange SHALL contain exactly one [1..1] observationRange.

[AND]

The observationRange SHALL contain exactly one [1..1] value such that it.

This value SHALL contain exactly one [1..1] @xsi:type="GLIST_PQ".

[AND

This value SHALL contain exactly one [1..1] head .

[AND]

This value SHALL contain exactly one [1..1] increment.

[AND]

This value SHALL contain exactly one [1..1] denominator.

[AND]

This section SHALL confirm to Multiple Choice Question Pattern

[AND]

Observation template (templateId 2.16.840.1.113883.10.20.32.4.8).

[AND]

This section SHALL contain exactly one [1..1] templateld such that it.

[AND]

This templateld SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.11".

[AND]

The value of entryRelationship/observation/value/high/@value SHALL be set to "1" in the Question Options Pattern Observation template (templateId 2.16.840.1.113883.10.20.32.4.20)

[AND]

This section SHALL contain exactly one [1..1] @typeCode="PRCN".

[AND]

This section SHALL contain exactly one [1..1] templateld.

[AND]

This templateId SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.12".

[AND]

This section SHOULD contain zero or one [0..1] conjunctionCode.

[AND]

This section SHALL contain exactly one [1..1] Criterion Pattern template or one of the following grouper templates:

- AllTrue Pattern template (templateld 2.16.840.1.113883.10.20.32.4.13).
- AllFalse Pattern template (templateld 2.16.840.1.113883.10.20.32.4.14).
- AtLeastOneTrue Pattern template (templateId 2.16.840.1.113883.10.20.32.4.15).
- AtLeastOneFalse Pattern template (templateId 2.16.840.1.113883.10.20.32.4.16).
- OnlyOneTrue Pattern template (templateld 2.16.840.1.113883.10.20.32.4.17).
- OnlyOneFalse Pattern template (templateId 2.16.840.1.113883.10.20.32.4.18).

[AND]

ClinicalDocument SHOULD contain zero or one [0..1] negationInd.

[AND]

This section SHOULD contain zero or one [0..1] negationInd.

[AND]

This section SHALL contain exactly one [1..1] templateld.

[AND]

This templateId SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.13".

This section SHALL contain exactly one [1..1] id.

[AND]

This section SHALL contain at least one [1..*] sdtc:precondition template (templateId 2.16.840.1.113883.10.20.32.4.12).

[AND]

This section SHALL contain exactly one [1..1] templateld.

[AND]

This templateId SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.14",

[AND]

This section SHALL contain exactly one [1..1] id.

[AND]

This section SHALL contain at least one [1..*] sdtc:precondition template (templateId 2.16.840.1.113883.10.20.32.4.12).

[AND]

This section SHALL contain exactly one [1..1] templateld.

[AND]

This templateld SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.15".

[AND]

This section SHALL contain exactly one [1..1] id.

[AND]

This section SHALL contain at least one [1..*] sdtc:precondition template (templateId 2.16.840.1.113883.10.20.32.4.12).

[AND]

This section SHALL contain exactly one [1..1] templateld such that it.

[AND]

This templateId SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.16",

[AND]

This section SHALL contain exactly one [1..1] id.

[AND]

This section SHALL contain at least one [1..*] sdtc:precondition template (templateId 2.16.840.1.113883.10.20.32.4.12),

[AND]

This section SHALL contain exactly one [1..1] templateld.

[AND]

This templateId SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.17".

[AND]

This section SHALL contain exactly one [1..1] id.

[AND]

This section SHALL contain at least one [1..*] sdtc:precondition template (templateId 2.16.840.1.113883.10.20.32.4.12).

[AND]

This section SHALL contain exactly one [1..1] templateld.

[AND]

This templateld SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.18".

	This section SHALL contain exactly one [11] id.			
	[AND]			
	This section SHALL contain at least one [1*] sdtc:precondition template (templateId 2.16.840.1.113883.10.20.32.4.12).			
Applicability	C_REC_000 AND C_REC_GEN_004 AND C_REC_GEN_006			
Other PICS				
Initial condition	The Questionnaire Enabled HFS receiver under test has previously sent a Questionnaire document to the simulated HFS application as a response to an HTTP GET operation (TP/HFS/REC/QUE/GEN/BV-000 has been previously executed)			
Test procedure	 Make sure that TP/HFS/REC/QUE/GEN/BV-000 has been previously executed, so that the HFS receiver under test has already submitted a Questionnaire document to the simulated HFS application. 			
	2. Check the following elements of the Clinical Document sent by the SUT:			
	ClinicalDocument element SHALL exactly one [11] realmCode.			
	 ClinicalDocument element SHOULD be selected from HL7 ValueSet BindingRealm [2.16.840.1.113883.1.11.20355] from codesystem hl7Realm [2.16.840.1.113883.5.1124] STATIC 2010-11-11. 			
	3. ClinicalDocument element SHALL contain exactly one [11]typeId.			
	 This typeId SHALL contain exactly one [11] @root="2.16.840.1.113883.1.3". 			
	This typeId SHALL contain exactly one [11] @extension="POCD-HD-000040".			
	 ClinicalDocument SHALL contain at least one [1*] header-level templatedId such that it 			
	This templateId SHALL contain exactly one [11]			
	• @root="2.16.840.1.113883.10.20.32"			
	5. ClinicalDocument SHALL contain exactly one [11] id.			
	6. ClinicalDocument SHALL contain exactly one [11] code.			
	7. ClinicalDocument SHALL contain exactly one [11] title.			
	8. ClinicalDocument SHALL contain exactly one [11] sdtc:statusCode.			
	 This statusCode SHALL contain exactly one [11] @code="NEW" (CodeSystem: ActStatus 2.16.840.1.113883.5.14) 			
	9. ClinicalDocument SHALL contain exactly one [11] effectiveTime.			
	 ClinicalDocument SHALL contain exactly one [11] confidentialityCode, which SHALL be selected from ValueSet HL7 Basic ConfidentialityKind 2.16.840.1.113883.1.11.16926 STATIC 2010-04-21. 			
	 ClinicalDocument SHALL contain exactly one [11] languageCode, which SHALL be selected from ValueSet Language 2.16.840.1.113883.1.11.11523 DYNAMIC. 			
	12. ClinicalDocument SHALL contain exactly one [11] recordTarget.			
	 Such recordTargets SHALL contain exactly one [11] patientRole. 			
	This patientRole SHALL contain exactly one [11] id.			
	 The value of the recordTarget/patientRole/id/@NullFlavor" SHALL be "NI" "No Information" 2.16.840.1.113883.5.1008 NullFlavor STATIC 			
	13. ClinicalDocument SHALL contain at least one [1*] author.			
	 Such authors SHALL contain exactly one [11] time. 			
	 Such authors SHALL contain exactly one [11] assignedAuthor. 			
	This assignedAuthor SHALL contain exactly one [11] id.			
	2. This assignedAuthor SHALL contain at least one [1*] addr.			
	 This assignedAuthor SHALL contain at least one [1*] telecom. 			

- 4. There SHALL be exactly one assignedAuthor/assignedPerson or exactly one assignedAuthor/assignedAuthoringDevice.
- 5. This assignedAuthor SHOULD contain zero or one [0..1] assignedPerson.
 - The assignedPerson, if present, SHALL contain at least one [1..*]
- 6. This assignedAuthor SHOULD contain zero or one [0..1] assignedAuthoringDevice
 - The assignedAuthoringDevice, if present, SHALL contain exactly one [1..1] manufacturerModelName
 - The assignedAuthoringDevice, if present, SHALL contain exactly one [1..1] softwareName
- 7. This assignedAuthor SHALL contain exactly one [1..1] representedOrganization .
- If assignedAuthor has an associated representedOrganization and no assignedPerson or assignedAuthoringDevice, then the value for "ClinicalDocument/author/assignedAuthor/id/@NullFlavor" SHALL be "NA" "Not applicable" 2.16.840.1.113883.5.1008 NullFlavor STATIC.
- 14. ClinicalDocument SHALL contain exactly one [1..1] custodian
 - This custodian SHALL contain exactly one [1..1] assignedCustodian
 - This assignedCustodian SHALL contain exactly one [1..1] representedCustodianOrganization.
 - a. This representedCustodianOrganization SHALL contain at least one [1..*] id.
 - b. This representedCustodianOrganization SHOULD contain exactly one [1..1] name.
 - c. This representedCustodianOrganization SHALL contain exactly one [1..1] telecom.
 - d. This representedCustodianOrganization SHALL contain exactly one [1..1] addr.
- 15. ClinicalDocument SHALL conform to the Universal Realm Questionnaire Form Definition Document Header template (templateld: 2.16.840.1.113883.10.20.32)
- 16. ClinicalDocument SHALL contain exactly one [1..1] templateld such that it SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.1.1"
- 17. ClinicalDocument SHALL contain exactly one [1..1] component such that it
 - SHALL contain exactly one [1..1] Questionnaire Form Definition Section template (templateld: 2.16.840.1.113883.10.20.32.2.1)
 - SHALL contain exactly one [1..1] Copy Right Section template (templateld: 2.16.840.1.113883.10.20.32.2.2)
- 18. Questionnaire Form Definition Section SHALL contain exactly one [1..1] templateld such that it SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.2.1"
- 19. Questionnaire Form Definition Section SHALL contain exactly one [1..1] code.
- 20. Questionnaire Form Definition SHOULD contain zero or one [0..1] title
- 21. Questionnaire Form Definition Section SHALL contain exactly one [1..1] text
- 22. Questionnaire Form Definition Section SHOULD contain zero or one [0..1] languageCode which SHALL be selected from ValueSet Language 2.16.840.1.113883.1.11.11526 DYNAMIC
- 23. Questionnaire Form Definition Section SHALL contain at least one [1..*] entry (CONF:58) such that it
 - SHALL contain exactly one [1..1] @typeCode="DRIV"
 - SHALL contain exactly one [1..1] Questions Organizer template(templateld: 2.16.840.1.113883.10.20.32.4.1)

- 24. Copy Right Section SHALL contain exactly one [1..1] templateld such that it SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.2.2"
- 25. Copy Right Section SHOULD contain zero or one [0..1] title
- 26. Copy Right Section SHALL contain exactly one [1..1] text
- 27. Copy Right Section SHOULD contain zero or one [0..1] languageCode which SHALL be selected from ValueSet Language 2.16.840.1.113883.1.11.11526 DYNAMIC
- 28. Copy Right Section SHALL contain at least one [1..*] entry such that it
 - 1. SHALL contain exactly one [1..1] @typeCode="DRIV"
 - 2. SHALL contain exactly one [1..1] Copy Right Pattern Observation template (templateld: 2.16.840.1.113883.10.20.32.4.21)
- 29. Questions Organizer SHALL contain exactly one [1..1] @classCode (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC)
- 30. Questions Organizer SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC)
- 31. Questions Organizer SHALL contain exactly one [1..1] templateld such that it SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.1" (CONF:72).
- 32. Questions Organizer SHALL contain at least one [1..*] id
- 33. Questions Organizer SHOULD contain zero or one [0..1] code
- 34. Questions Organizer SHALL contain exactly one [1..1] statusCode
 - This statusCode SHALL contain exactly one [1..1] @code="COMPLETED" (CodeSystem: ActStatus 2.16.840.1.113883.5.14)
- 35. Questions Organizer MAY contain zero or more [0..*] Precondition Pattern templates (templateId 2.16.840.1.113883.10.20.32.4.4) or sdtc:precondition(templateId 2.16.840.1.113883.10.20.32.4.12)
- 36. Questions Organizer SHALL contain at least one [1..*] component such that it
 - SHALL contain exactly one [1..1] sequenceNumber
 - SHALL contain exactly one [1..1] of the following templates
 - Numeric Question Pattern Observation template (templateld: 2.16.840.1.113883.10.20.32.4.7)
 - 2. Multiple Choice Question Pattern Observation template (templateld: 2.16.840.1.113883.10.20.32.4.8)
 - 3. Text Question Pattern Observation template (templateld: 2.16.840.1.113883.10.20.32.4.9)
 - Analog Slider Question Pattern Observation template (templateld: 2.16.840.1.113883.10.20.32.4.10)
 - 5. Discrete Slider Question Pattern Observation template (templateld: 2.16.840.1.113883.10.20.32.4.11)
- Question Media Pattern SHALL contain exactly one [1..1] @classCode (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC)
- 38. Question Media Pattern SHALL contain exactly one [1..1] @moodCode="DEF" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC)
- 39. Question Media Pattern SHALL contain exactly one [1..1] templateld such that it SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.2"
- 40. Question Media Pattern SHALL contain exactly one [1..1] value
- 41. Criterion Pattern SHALL contain exactly one [1..1] templateld such that it SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.3"
- 42. Criterion Pattern SHALL contain exactly one [1..1] @classCode (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC)
- 43. Criterion Pattern SHALL contain exactly one [1..1] @moodCode="EVN.CRT" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC)

- 44. Criterion Pattern SHALL contain exactly one [1..1] code
- 45. Criterion Pattern SHALL contain exactly one [1..1] value
- 46. Precondition Pattern SHALL contain exactly one [1..1] @typeCode="PRCN"
- 47. Precondition Pattern SHALL contain exactly one [1..1] template such that it SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.4".
- 48. Precondition Pattern SHALL contain exactly one [1..1] Criterion Pattern template templateld 2.16.840.1.113883.10.20.32.4.3)
- 49. Question Text Help SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC)
- 50. Question Text Help SHALL contain exactly one [1..1] @moodCode="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC)
- 51. Question Text Help SHALL contain exactly one [1..1] templateld such that it SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.19".
- 52. Question Text Help SHALL contain exactly one [1..1] code
 - This code SHALL contain exactly one [1..1] @code="48767-8" Annotation Comment.
 - This code SHALL contain exactly one [1..1] (@CodeSystem: 2.16.840.1.113883.6.1"
- 53. Question Text Help SHALL contain [1..1] value so that itSHALL contain [1..1] @xsi:type="ST"
- 54. Question Text Help SHOULD contain zero or one [0..1] languageCode which SHALL be selected from ValueSet Language 2.16.840.1.113883.1.11.11526 DYNAMIC
- Question Reference Range Pattern SHALL contain exactly one [1..1] @typeCode="REFV" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002)
- 56. Question Reference Range Pattern SHALL contain exactly one [1..1] templateld such that it SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.5".
- Question Reference Range Pattern SHALL contain exactly one [1..1] observationRange so that it
 - MAY contain zero or one [0..1] text
 - SHALL contain exactly one [1..1] value so that it SHALL contain exactly one [1..1] @xsi:type, SHALL contain exactly one [1..1] low and SHALL contain exactly one [1..1] high.
- 58. Question Options Pattern Observation SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC)
- Question Options Pattern Observation SHALL contain exactly one [1..1]
 @moodCode="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC)
- 60. Question Options Pattern Observation SHALL contain exactly one [1..1] templateld such that it SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.20".
- 61. Question Options Pattern Observation SHALL contain exactly one [1..1] code
 - This code SHALL contain exactly one [1..1] @code="74467-2" Number of Options
 - This code SHALL contain exactly one [1..1]
 @CodeSystem:=" 2.16.840.1.113883.6.1".
- 62. Question Options Pattern Observation SHALL contain exactly one [1..1] value
 - SHALL contain exactly one [1..1] @xsi:type="IVL_INT"
 - SHALL contain exactly one [1..1] low.
 - SHALL contain exactly one [1..1] high
- Question Feedback Pattern Observation SHALL contain exactly one [1..1]
 @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC)

- 64. Question Feedback Pattern Observation SHALL contain exactly one [1..1] @moodCode="DEF" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC)
- Question Feedback Pattern Observation SHALL contain exactly one [1..1] templateld such that it SHALL contain exactly one [1..1]
 @root="2.16.840.1.113883.10.20.32.4.6"
- 66. Question Feedback Pattern Observation SHALL contain exactly one [1..1] code
- 67. Question Feedback Pattern Observation SHALL contain exactly one [1..1] value
- Question Feedback Pattern Observation SHOULD contain zero or one [0..1] languageCode which SHALL be selected from ValueSet Language 2.16.840.1.113883.1.11.11526 DYNAMIC
- 69. Question Feedback Pattern Observation SHOULD contain zero or more [0..*] Precondition Pattern template(templateId 2.16.840.1.113883.10.20.32.4.4) or sdtc:precondition(templateId 2.16.840.1.113883.10.20.32.4.12)
- 70. Copy Right Pattern Observation SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC)
- 71. Copy Right Pattern Observation SHALL contain exactly one [1..1]
 @moodCode="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC)
- 72. Copy Right Pattern Observation SHALL contain exactly one [1..1] templateld such that it SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.21".
- 73. Copy Right Pattern Observation SHALL contain exactly one [1..1] code
 - This code SHALL contain exactly one [1..1] @code="COPY"
 - This code SHALL contain exactly one [1..1]
 @CodeSystem="2.16.840.1.113883.5.4".
- 74. Copy Right Pattern Observation SHALL contain [1..1] value so that it SHALL contain [1..1] @xsi:type="ST"
- Copy Right Pattern Observation SHOULD contain zero or one [0..1] languageCode which SHALL be selected from ValueSet Language 2.16.840.1.113883.1.11.11526 DYNAMIC
- 76. Numeric Question Pattern Observation SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC)
- 77. Numeric Question Pattern Observation SHALL contain exactly one [1..1] @moodCode="DEF" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC)
- 78. Numeric Question Pattern Observation SHALL contain exactly one [1..1] templateld such that it SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.7".
- 79. Numeric Question Pattern Observation SHALL contain at least one [1..*] id
- 80. Numeric Question Pattern Observation SHALL contain exactly one [1..1] code
 - This code SHALL contain exactly one [1..1] @code
 - This code SHALL contain exactly one [1..1] @codeSystem"
 - This code SHALL contain exactly one [1..1] originalText
- 81. Numeric Question Pattern Observation SHOULD contain zero or one [0..1] languageCode which SHALL be selected from ValueSet Language 2.16.840.1.113883.1.11.11526 DYNAMIC
- 82. Numeric Question Pattern Observation MAY contain zero or one [0..1] entryRelationship
 - The entryRelationship, if present, SHALL contain exactly one [1..1]
 @typeCode="SUBJ" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002)
 - SHALL contain exactly one [1..1] Question Help Text Pattern Observation template (templateId 2.16.840.1.113883.10.20.32.4.19)
- 83. Numeric Question Pattern Observation SHOULD contain zero or one [0..1] entryRelationship
 - The entryRelationship, if present, SHALL contain exactly one [1..1]

- @typeCode="REFR" (CodeSystem: HL7ActRelationshipType2.16.840.1.113883.5.1002)
- SHALL conform to the Question Media Pattern template (templateId 2.16.840.1.113883.10.20.32.4.2)
- SHALL conform to the Question Feedback Pattern Observation template (templateId 2.16.840.1.113883.10.20.32.4.6)
- 84. Numeric Question Pattern Observation SHOULD contain zero or more [0..*] Precondition Pattern templates (templateId 2.16.840.1.113883.10.20.32.4.4) or sdtc:precondition(templateId 2.16.840.1.113883.10.20.32.4.12)
- 85. Numeric Question Pattern Observation SHOULD contain zero or more [0..*]
 Question Reference Range Pattern template (templateId
 2.16.840.1.113883.10.20.32.4.5)
- 86. Multiple Choice Question Pattern Observation SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC)
- 87. Multiple Choice Question Pattern Observation SHALL contain exactly one [1..1] @moodCode="DEF" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC)
- 88. Multiple Choice Question Pattern Observation SHALL contain exactly one [1..1] templateld such that it SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.8"
- 89. Multiple Choice Question Pattern Observation SHALL contain at least one [1..*] id
- 90. Multiple Choice Question Pattern Observation SHALL contain exactly one [1..1] code
 - This code SHALL contain exactly one [1..1] @code
 - This code SHALL contain exactly one [1..1] @codeSystem"
 - This code SHALL contain exactly one [1..1] originalText
- 91. Multiple Choice Question Pattern Observation SHOULD contain zero or one [0..1] languageCode which SHALL be selected from ValueSet Language 2.16.840.1.113883.1.11.11526
- 92. Multiple Choice Question Pattern Observation SHALL contain at least two or more [2..*] value
 - SHALL contain exactly one [1..1] @xsi:type="CE"
 - This code SHALL contain exactly one [1..1] @code
 - This code SHALL contain exactly one [1..1] @CodeSystem
 - This code SHALL contain exactly one [1..1] @displayName
- 93. Multiple Choice Question Pattern Observation SHOULD contain zero or many [0..*] entryRelationship
 - SHALL contain exactly one [1..1] @typeCode="SUBJ" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002)
 - SHALL contain exactly one [1..1] Question Help Text Pattern Observation template (templateId 2.16.840.1.113883.10.20.32.4.19)
 - SHALL contain exactly one [1..1] Question Options Pattern Observation template (templateId 2.16.840.1.113883.10.20.32.4.20)
- 94. Multiple Choice Question Pattern Observation SHOULD contain zero or one [0..1] entryRelationship
 - The entryRelationship, if present, SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002)
 - SHALL conform to the Question Media Pattern template (templateId 2.16.840.1.113883.10.20.32.4.2)
- 95. Multiple Choice Question Pattern Observation SHOULD contain zero or one [0..*] entryRelationship
 - The entryRelationship, if present, SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002)

- SHALL conform to the Question Feedback Pattern Observation template (templateId 2.16.840.1.113883.10.20.32.4.6)
- 96. Multiple Choice Question Pattern Observation SHOULD contain zero or one [0..1] entryRelationship
 - The entryRelationship, if present, SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002)
 - SHALL conform to the Text Question Pattern Observation template (templateId 2.16.840.1.113883.10.20.32.4.9)
- 97. Multiple Choice Question Pattern Observation SHOULD contain zero or more [0..*] Precondition Pattern templates (templateld 2.16.840.1.113883.10.20.32.4.4) or sdtc:precondition(templateld 2.16.840.1.113883.10.20.32.4.12)
- 98. Text Question Pattern Observation SHALL contain exactly one [1..1]
 @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC)
- Text Question Pattern Observation SHALL contain exactly one [1..1]
 @moodCode="DEF" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC)
- 100.Text Question Pattern Observation SHALL contain exactly one [1..1] templateld such that it SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.6"
- 101.Text Question Pattern Observation SHALL contain at least one [1..*] id
- 102. Text Question Pattern Observation SHALL contain exactly one [1..1] code
 - This code SHALL contain exactly one [1..1] @code
 - This code SHALL contain exactly one [1..1] @codeSystem"
 - This code SHALL contain exactly one [1..1] originalText
- 103.Text Question Pattern Observation SHOULD contain zero or one [0..1] languageCode which SHALL be selected from ValueSet Language 2.16.840.1.113883.1.11.11526 DYNAMIC
- 104. Text Question Pattern Observation MAY contain zero or one [0..1] entryRelationship
 - The @typeCode="SUBJ" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002)
 - SHALL contain exactly one [1..1] Question Help Text Pattern Observation template (templateld 2.16.840.1.113883.10.20.32.4.19)
- 105.Text Question Pattern Observation SHOULD contain zero or one [0..1] entryRelationship
 - The entryRelationship, if present, SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002)
 - SHALL conform to the Question Media Pattern template (templateId 2.16.840.1.113883.10.20.32.4.2)
- 106.Text Question Pattern Observation SHOULD contain zero or more [0..*] Precondition Pattern templates (templateld 2.16.840.1.113883.10.20.32.4.4) or sdtc:precondition(templateld 2.16.840.1.113883.10.20.32.4.12)
- 107. Analog Slider Question Pattern Observation SHALL conform to the Numeric Question Pattern Observation template (templateId 2.16.840.1.113883.10.20.32.4.7)
- 108. Analog Slider Question Pattern Observation SHALL NOT contain Question Reference Range Pattern template (templateId 2.16.840.1.113883.10.20.32.4.5)
- 109. Analog Slider Question Pattern Observation SHALL contain exactly one [1..1] templateld such that it SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.10"
- 110.Analog Slider Question Pattern Observation SHALL contain exactly one [1..1] referenceRange
 - SHALL contain exactly one [1..1] @typeCode="REFV" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002)
 - SHALL contain exactly one [1..1] observationRange so that it SHALL contain

- exactly one [1..1] value, so that
- a. SHALL contain exactly one [1..1] @xsi:type="GLIST_PQ"
- b. SHALL contain exactly one [1..1] head
- c. SHALL contain exactly one [1..1] increment
- d. SHALL contain exactly one [1..1] denominator
- 111.Discrete Slider Question Pattern SHALL confirm to Multiple Choice Question Pattern Observation template (templateld 2.16.840.1.113883.10.20.32.4.8)
- 112.Discrete Slider Question Pattern SHALL contain exactly one [1..1] templateld such that it SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.11"
- 113. The value of entryRelationship/observation/value/high/@value SHALL be set to "1" in the Question Options Pattern Observation template (templateId 2.16.840.1.113883.10.20.32.4.20)
- 114. Precondition extension pattern
- 115.Precondition extension pattern SHALL contain exactly one [1..1] @typeCode="PRCN"
- 116.Precondition extension pattern SHALL contain exactly one [1..1] templateld such that it SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.12"
- 117. Precondition extension pattern SHOULD contain zero or one [0..1] conjunctionCode
- 118.Precondition extension pattern SHALL contain exactly one [1..1] Criterion Pattern template or one of the following grouper templates
 - AllTrue Pattern template (templateld 2.16.840.1.113883.10.20.32.4.13)
 - AllFalse Pattern template (templateld 2.16.840.1.113883.10.20.32.4.14)
 - AtLeastOneTrue Pattern template (templateId 2.16.840.1.113883.10.20.32.4.15)
 - AtLeastOneFalse Pattern template (templateId 2.16.840.1.113883.10.20.32.4.16)
 - OnlyOneTrue Pattern template (templateId 2.16.840.1.113883.10.20.32.4.17)
 - OnlyOneFalse Pattern template (templateId 2.16.840.1.113883.10.20.32.4.18)
- 119. Precondition extension pattern SHOULD contain zero or one [0..1] negationInd
- 120.AllTrue Pattern SHALL contain exactly one [1..1] templateld such that it SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.13"
- 121. AllTrue Pattern SHALL contain exactly one [1..1] id
- 122.AllTrue Pattern SHALL contain at least one [1..*] sdtc:precondition template (templateId 2.16.840.1.113883.10.20.32.4.12)
- 123.AllFalse Pattern SHALL contain exactly one [1..1] templateld such that it SHALL contain exactly one [1..1] @root=" 2.16.840.1.113883.10.20.32.4.14"
- 124. All False Pattern SHALL contain exactly one [1..1] id
- 125.AllFalse Pattern SHALL contain at least one [1..*] sdtc:precondition template (templateId 2.16.840.1.113883.10.20.32.4.12)
- 126.AtLeastOneFalsePattern SHALL contain exactly one [1..1] templateId such that it SHALL contain exactly one [1..1] @root=" 2.16.840.1.113883.10.20.32.4.16"
- 127.AtLeastOneFalsePattern SHALL contain exactly one [1..1] id
- 128.AtLeastOneFalsePattern SHALL contain at least one [1..*] sdtc:precondition template (templateId 2.16.840.1.113883.10.20.32.4.12)
- 129.OnlyOneTrue Pattern SHALL contain exactly one [1..1] templateld such that it SHALL contain exactly one [1..1] @root=" 2.16.840.1.113883.10.20.32.4.17"
- 130. OnlyOneTrue Pattern SHALL contain exactly one [1..1] id
- 131.OnlyOneTrue Pattern SHALL contain at least one [1..*] sdtc:precondition template (templateId 2.16.840.1.113883.10.20.32.4.12)
- 132.OnlyOneFalse Pattern SHALL contain exactly one [1..1] templateld such that it SHALL contain exactly one [1..1] @root=" .16.840.1.113883.10.20.32.4.18"

	133.OnlyOneFalse Pattern SHALL contain exactly one [11] id
	134.OnlyOneFalse Pattern SHALL contain at least one [1*] sdtc:precondition template (templateId 2.16.840.1.113883.10.20.32.4.12)
Pass/Fail criteria	The submitted questionnaire document is compliant with HL7 Implementation Guide for CDA R2: Questionnaire Form Definition, Release 1 as described above.
Notes	

TP ld		TP/HFS/REC/QUE/CDA	/BV-001		
TP label		Questionnaire Response CDA syntactic and semantic validation. HFS Receiver.			
Coverage	Spec	[HL7 CDA QRD]			
	Testable items	CONF-QR-1; M	CONF-QR-2;R	CONF-QR-3;M	
		CONF-QR-4;M	CONF-QR-5;M	CONF-QR-6;M	
		CONF-QR-7;M	CONF-QR-8;M	CONF-QR-10;M	
		CONF-QR-13 ; R	CONF-QR-14;M	CONF-QR-15;M	
		CONF-QR-16 ; M	CONF-QR-17;M	CONF-QR-18 ;M	
		CONF-QR-19;M	CONF-QR-20;M	CONF-QR-21;M	
		CONF-QR-22;M	CONF-QR-23 ;M	CONF-QR-24;M	
		CONF-QR-25;M	CONF-QR-26;M	CONF-QR-27;M	
		CONF-QR-28 ;M	CONF-QR-29;M	CONF-QR-30;M	
		CONF-QR-31;M	CONF-QR-32;M	CONF-QR-33 ;R	
		CONF-QR-34;M	CONF-QR-35;M	CONF-QR-36;M	
		CONF-QR-37;M	CONF-QR-38 ;M	CONF-QR-39;R	
		CONF-QR-40;M	CONF-QR-41;R	CONF-QR-42;M	
		CONF-QR-43;M	CONF-QR-44;M	CONF-QR-45;O	
		CONF-QR-46;M	CONF-QR-47;M	CONF-QR-48 ;M	
		CONF-QR-49;M	CONF-QR-50;M	CONF-QR-51;M	
		CONF-QR-52;O	CONF-QR-53 ;O	CONF-QR-54;M	
		CONF-QR-55;R	CONF-QR-56;M	CONF-QR-57;M	
		CONF-QR-58 ;O	CONF-QR-59;R	CONF-QR-60;M	
		CONF-QR-61;M	CONF-QR-62;M	CONF-QR-63;M	
		CONF-QR-64;M	CONF-QR-65;M	CONF-QR-66;R	
		CONF-QR-67;M	CONF-QR-68 ;O	CONF-QR-69;M	
		CONF-QR-70;R	CONF-QR-71;O	CONF-QR-72;M	
		CONF-QR-73 ;O	CONF-QR-74;M	CONF-QR-75;R	

CONF-QR-76;M	CONF-QR-77;M	CONF-QR-78 ;M
CONF-QR-79;M	CONF-QR-80;M	CONF-QR-81;O
CONF-QR-82;M	CONF-QR-83 ;M	CONF-QR-84;M
CONF-QR-85;M	CONF-QR-86;O	CONF-QR-87;M
CONF-QR-88 ;M	CONF-QR-89;M	CONF-QR-90 ;M
CONF-QR-91;M	CONF-QR-92;O	CONF-QR-93 ;M
CONF-QR-94;M	CONF-QR-95;R	CONF-QR-96 ;R
CONF-QR-97;M	CONF-QR-98 ;O	CONF-QR-99;O
CONF-QR-100;M	CONF-QR-101;M	CONF-QR-102;R
CONF-QR-103 ;M	CONF-QR-104;M	CONF-QR-105;O
CONF-QR-106;M	CONF-QR-107;M	CONF-QR-108;M
CONF-QR-109;M	CONF-QR-110;R	CONF-QR-111;R
CONF-QR-112;M	CONF-QR-113;M	CONF-QR-114;M
CONF-QR-115;M	CONF-QR-116;	CONF-QR-117;M
CONF-QR-118;M	CONF-QR-119;	CONF-QR-120 ;M
CONF-QR-121;M	CONF-QR-122;R	CONF-QR-123 ;M
CONF-QR-124;R	CONF-QR-125;M	CONF-QR-126;M
CONF-QR-127;M	CONF-QR-128;M	CONF-QR-129 ;M
CONF-QR-130;M	CONF-QR-131;M	CONF-QR-132 ;M
CONF-QR-133;R	CONF-QR-134;M	CONF-QR-135 ;M
CONF-QR-136;M	CONF-QR-137;M	CONF-QR-138 ;M
CONF-QR-139;M	CONF-QR-140,M	CONF-QR-141 ;M
CONF-QR-142;M	CONF-QR-143;M	CONF-QR-144 ;M
CONF-QR-145;M	CONF-QR-146;M	CONF-QR-147;M
CONF-QR-148;M	CONF-QR-149;M	CONF-QR-150;M
CONF-QR-151;M	CONF-QR-152;M	CONF-QR-153;O
CONF-QR-154;M	CONF-QR-155;M	CONF-QR-156;M
CONF-QR-157;M	CONF-QR-158;M	CONF-QR-159;M
CONF-QR-160;M	CONF-QR-161;M	CONF-QR-162;M
CONF-QR-163;M	CONF-QR-164;M	CONF-QR-165;M
CONF-QR-166;M	CONF-QR-167;R	CONF-QR-168;M
CONF-QR-169;M	CONF-QR-170;M	CONF-QR-171;M

	CONF-QR-172;O	CONF-QR-173;M	CONF-QR-174;M
	CONF-QR-175;R	CONF-QR-176,M	CONF-QR-177;M
	CONF-QR-178;R	CONF-QR-179;M	CONF-QR-180;M
	CONF-QR-181;M	CONF-QR-182;M	CONF-QR-183;M
	CONF-QR-184;M	CONF-QR-185;M	CONF-QR-186;M
	CONF-QR-187;M	CONF-QR-188;M	CONF-QR-189;M
	CONF-QR-190;M	CONF-QR-191;M	CONF-QR-192;M
	CONF-QR-193;M	CONF-QR-194;M	CONF-QR-195;M
	CONF-QR-196;R	CONF-QR-197;M	CONF-QR-198;M
	CONF-QR-199;M	CONF-QR-200;R	CONF-QR-201;M
	CONF-QR-202;M	CONF-QR-203;M	CONF-QR-204;M
CONF-QR-	CONF-QR-205;M	CONF-QR-206;M	CONF-QR-207;M
	CONF-QR-208;M	CONF-QR-209;M	CONF-QR-210;M
	CONF-QR-211;M	CONF-QR-212;M	CONF-QR-213;R
	CONF-QR-214;M	CONF-QR-215;M	CONF-QR-216;M
	CONF-QR-217;M	CONF-QR-218;M	CONF-QR-219;M
	CONF-QR-220;M	CONF-QR-221;R	CONF-QR-222;M
	CONF-QR-223;M	CONF-QR-224;M	CONF-QR-225;M
	CONF-QR-226;M	CONF-QR-227;M	CONF-QR-228;M
	CONF-QR-229;M	CONF-QR-230;M	CONF-QR-231;M
	CONF-QR-232;M	CONF-QR-233;M	CONF-QR-234;M
	CONF-QR-235;M	CONF-QR-236;M	CONF-QR-237;M
	CONF-QR-238;M	CONF-QR-239;M	CONF-QR-240;M
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Test purpose

Check that:

SUT has submitted a syntactically correct questionnaire response document so that:

ClinicalDocument element SHALL contain exactly one [1..1] realmCode.

[AND]

ClinicalDocument element SHOULD be selected from HL7 ValueSet BindingRealm [2.16.840.1.113883.1.11.20355] from codesystem hl7Realm [2.16.840.1.113883.5.1124] STATIC 2010-11-11.

[AND]

ClinicalDocument element SHALL contain exactly one [1..1] typeId.

[AND]

ClinicalDocument/typeId element SHALL contain exactly one [1..1] @root="2.16.840.1.113883.1.3".

[AND]

ClinicalDocument/typeId element SHALL contain exactly one [1..1]

@extension="POCD_HD000040". [AND] ClinicalDocument SHALL contain at least one [1..*] header-level templateld. [AND] ClinicalDocument/templateId SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.29". ClinicalDocument/templateId SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.33". [AND] ClinicalDocument SHALL contain exactly one [1..1] id. [AND] ClinicalDocument SHALL contain exactly one [1..1] code. [AND] ClinicalDocument SHALL contain exactly one [1..1] title. [AND] ClinicalDocument SHALL contain exactly one [1..1] effectiveTime. ClinicalDocument SHALL contain exactly one [1..1] confidentialityCode, which SHALL be selected from ValueSet HL7 BasicConfidentialityKind 2.16.840.1.113883.1.11.16926 STATIC 2010-04-21. [AND] ClinicalDocument SHALL contain exactly one [1..1] languageCode, which SHALL be selected from ValueSet Language 2.16.840.1.113883.1.11.11526 DYNAMIC. [AND] ClinicalDocument SHALL contain exactly one [1..1] recordTarget. [AND] Such recordTargets SHALL contain exactly one [1..1] patientRole. [AND] This patientRole SHALL contain at least one [1..*] id. [AND] This patientRole SHALL contain at least one [1..*] addr. [AND] This patientRole SHALL contain at least one [1..*] telecom. [AND] This patientRole SHALL contain exactly one [1..1] patient. [AND] This patient SHALL contain exactly one [1..1] name. [AND] This patient SHALL contain exactly one [1..1] administrativeGenderCode. [AND] This patient SHALL contain exactly one [1..1] birthTime. [AND] Patient/birthTime SHALL be precise to year.

Patient/birthTime SHOULD be precise to day.

ClinicalDocument SHALL contain at least one [1..*] author.

[AND

Such authors SHALL contain exactly one [1..1] time.

[AND]

Such authors SHALL contain exactly one [1..1] assignedAuthor.

[AND]

Author/assignedAuthor SHALL contain exactly one [1..1] id.

[AND]

Author/assignedAuthor/id SHOULD utilize the combined @root and @extension attributes to record the person's or the device's identity in a secure, trusted, and unique way

[AND]

Author/assignedAuthor, when the author is a person, this assignedAuthor SHALL contain exactly one [1..1] code.

[AND]

Author/assignedAuthor SHALL contain exactly one [1..1] @code, which SHOULD be selected from the Personal And Legal Relationship Role Type 2.16.840.1.113883.11.20.12.1.

[AND

Author/assignedAuthor SHALL contain at least one [1..*] addr.

[AND]

Author/assignedAuthor SHALL contain at least one [1..*] telecom.

[AND]

Author/assignedAuthor There SHALL be exactly one assignedAuthor/assignedPerson or exactly one assignedAuthor/assignedAuthoringDevice.

[AND]

Author/assignedAuthor SHOULD contain zero or one [0..1] assignedPerson.

[AND]

Author/assignedAuthor/assignedPerson if present, SHALL contain at least one [1..*] name.

[AND]

Author/assignedAuthor SHOULD contain zero or one [0..1] assignedAuthoringDevice.

[AND]

Author/assignedAuthor/assignedAuthoringDevice, if present, SHALL contain exactly one [1..1] manufacturerModelName.

[AND]

Author/assignedAuthor/assignedAuthoringDevice, if present, SHALL contain exactly one [1..1] softwareName.

[AND]

If AssignedAuthor has an associated representedOrganization with no assignedPerson or assignedAuthoringDevice, then the value for

"ClinicalDocument/author/assignedAuthor/id/@NullFlavor" SHALL be "NA" "Not applicable" 2.16.840.1.113883.5.1008 NullFlavor STATIC

[AND]

ClinicalDocument MAY contain zero or one [0..1] dataEnterer.

[AND]

DataEnterer , if present, SHALL contain exactly one [1..1] assignedEntity.

[AND]

DataEnterer/assignedEntity SHALL contain at least one [1..*] id.

DataEnterer/assignedEntity SHALL contain at least one [1..*] addr.

[AND]

DataEnterer/assignedEntity SHALL contain at least one [1..*] telecom.

[AND]

DataEnterer/assignedEntity SHALL contain exactly one [1..1] assignedPerson.

[AND]

DataEnterer/assignedEntity/assignedPerson SHALL contain at least one [1..*] name.

[AND]

DataEnterer/assignedEntity/assignedPerson MAY contain zero or one [0..1] code to encode the relationship of the person to the recordTarget.

[AND]

ClinicalDocument MAY contain zero or more [0..*] informant.

[AND]

ClinicalDocument/informant SHALL contain exactly one [1..1] assignedEntity OR exactly one [1..1] relatedEntity.

[AND]

This assignedentity or relatedentity SHOULD contain at least one [1..*] addr.

[AND]

This assignedentity or relatedentity SHALL contain exactly one [1..1] assignedPerson OR exactly one [1..1] relatedPerson.

[AND]

This assignedentity or relatedentity SHALL contain at least one [1..*] name.

[AND]

This assignedEntity MAY contain zero or one [0..1] code.

[AND]

This assignedentity or relatedentity SHOULD contain zero or more [0..*] id.

[AND]

ClinicalDocument SHALL contain exactly one [1..1] custodian.

[AND]

This custodian SHALL contain exactly one [1..1] assignedCustodian.

[AND]

This assignedCustodian SHALL contain exactly one [1..1] representedCustodianOrganization which may be the person when the document is not maintained by an organization.

[AND]

This representedCustodianOrganization SHALL contain at least one [1..*] id.

[AND]

This representedCustodianOrganization SHALL contain exactly one [1..1] name.

[AND]

This representedCustodianOrganization SHALL contain exactly one [1..1] telecom.

[AND]

This telecom SHOULD contain exactly one [1..1] @use.

[AND]

This representedCustodianOrganization SHALL contain at least one [1..*] addr.

[AND]

MAY contain zero or more [0..*] informationRecipient.

[AND]

The informationRecipient, if present, SHALL contain exactly one [1..1] intendedRecipient.

[AND]

This intendedRecipient SHOULD contain atleast one [1..*] id.

[AND]

This intendedRecipient MAY contain zero or one [0..1] informationRecipient.

[AND]

The informationRecipient, if present, SHALL contain at least one [1..*] name.

[AND]

This intendedRecipient MAY contain zero or one [0..1] receivedOrganization.

[AND]

The receivedOrganization, if present, SHALL contain exactly one [1..1] name.

[AND]

ClinicalDocument SHOULD contain zero or one [0..1] legalAuthenticator.

[AND]

The legalAuthenticator, if present, SHALL contain exactly one [1..1] time.

[AND]

The legalAuthenticator, if present, SHALL contain exactly one [1..1] signatureCode.

[AND]

This signatureCode SHALL contain exactly one [1..1] @code="S" (CodeSystem: Participationsignature 2.16.840.1.113883.5.89).

[AND]

The legalAuthenticator, if present, SHALL contain exactly one [1..1] assignedEntity.

[AND]

This assignedEntity SHALL contain at least one [1..*] id.

[AND]

This assignedEntity MAY contain zero or one [0..1] code.

[AND]

This assignedEntity SHALL contain at least one [1..*] addr.

[AND]

This assignedEntity SHALL contain at least one [1..*] telecom.

[AND]

This assignedEntity SHALL contain exactly one [1..1] assignedPerson.

[AND]

This assignedPerson SHALL contain at least one [1..*] name.

[AND]

ClinicalDocument MAY contain zero or more [0..*] authenticator.

[AND]

The authenticator, if present, SHALL contain exactly one [1..1] time.

[AND]

The authenticator, if present, SHALL contain exactly one [1..1] signatureCode.

[AND]

This signatureCode SHALL contain exactly one [1..1] @code="S" (CodeSystem:

Participationsignature 2.16.840.1.113883.5.89).

[AND]

The authenticator, if present, SHALL contain exactly one [1..1] assignedEntity.

[AND]

This assignedEntity SHALL contain at least one [1..*] id.

[AND]

This assignedEntity MAY contain zero or one [0..1] code.

[AND]

This assignedEntity SHALL contain at least one [1..*] addr.

[AND]

This assignedEntity SHALL contain at least one [1..*] telecom.

[AND]

Such telecoms SHOULD contain exactly one [1..1] @use.

[AND]

This assignedEntity SHALL contain exactly one [1..1] assignedPerson.

[AND]

This assignedPerson SHALL contain at least one [1..*] name.

[AND]

ClinicalDocument MAY contain zero or more [0..*] participant.

[AND]

The participant, if present, MAY contain zero or one [0..1] time.

[AND]

Such participants, if present, SHALL have an associatedPerson or scopingOrganization element under participant/associatedEntity.

[AND]

Unless otherwise specified by the document specific header constraints, when participant/@typeCode is IND, associatedEntity/@classCode SHALL be selected from ValueSet 2.16.840.1.113883.11.20.9.33 INDRoleclassCodes STATIC 2011-09-30.

[AND]

ClinicalDocument SHOULD contain zero or one [0..1] inFulfillmentOf.

[AND]

The inFulfillmentOf, if present, SHALL contain exactly one [1..1] order.

[AND]

This order SHALL contain at least one [1..*] id.

[AND]

ClinicalDocument MAY contain zero or one [0..1] componentOf.

[AND]

The componentOf, if present, SHALL contain exactly one [1..1] encompassingEncounter.

[AND]

This encompassing Encounter SHALL contain at least one [1..*] id.

[AND]

This encompassingEncounter SHALL contain exactly one [1..1] effectiveTime.

[AND]

ClinicalDocument SHALL conform to the Universal Realm Questionnaire Response Document Header template (templateld: 2.16.840.1.113883.10.20.33).

[AND]

Patient generated Questionnaire Response Document in US Realm SHOULD conform to the US Realm Patient Generated Document Header template (templateld: 2.16.840.1.113883.10.20.29.1).

[AND]

Clinicians generated Questionnaire Response Document in US Realm SHOULD conform to the US C-CDA General Header template (templateld: 2.16.840.1.113883.10.20.22.1.1).

[AND

ClinicalDocument SHALL contain exactly one [1..1] templateld.

[AND]

ClinicalDocument/tempalteld SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.33.1.1".

[AND]

ClinicalDocument SHALL contain exactly one [1..1] component.

[AND]

ClinicalDocument/component SHALL contain exactly one [1..1] structuredBody.

[AND]

ClinicalDocument/component/structureBody SHALL contain at least one [1..*] component .

[AND]

ClinicalDocument/component/structureBody/component SHALL contain exactly one [1..1] Questionnaire Response Section template(templateId: '2.16.840.1.113883.10.20.33.1.1').

[AND]

ClinicalDocument/component/structureBody/component SHALL contain exactly one [1..1] Copy Right Section template (templateId:2.16.840.1.113883.10.20.32.2.2).

[AND]

This section SHALL contain exactly one [1..1] templateld .

[AND]

Section/templateId SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.33.2.1".

[AND]

This section SHALL contain exactly one [1..1] code.

[AND]

This section SHOULD contain zero or one [0..1] title.

[AND]

This section SHALL contain exactly one [1..1] text.

[AND]

This section SHOULD contain zero or one [0..1] languageCode which SHALL be selected from ValueSet Language 2.16.840.1.113883.1.11.11526 DYNAMIC.

[AND]

This section SHALL contain at least one [1..*] entry .

[AND]

This section/entry SHALL contain exactly one [1..1] @typeCode="DRIV".

[AND]

This section/entry SHALL contain exactly one [1..1] Responses Organizer template(templateId: 2.16.840.1.113883.10.20.33.4.1).

[AND]

This section SHALL contain exactly one [1..1] @classCode="BATTERY" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC).

This section SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC).

[AND]

This section SHALL contain exactly one [1..1] templateld.

[AND]

This section/templateld SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.33.4.1".

[AND]

This section SHALL contain at least one [1..*] id.

[AND]

This section SHOULD contain zero or one [0..1] code.

[AND]

This section SHALL contain exactly one [1..1] statusCode.

[AND]

This statusCode SHALL contain exactly one [1..1] @code="completed" (CodeSystem: ActStatus 2.16.840.1.113883.5.14).

[AND]

This section SHALL contain at least one [1..*] component such that it

[AND]

This section/component SHALL contain exactly one [1..1] sequenceNumber.

[AND]

This section/component SHALL contain exactly one [1..1] of the following templates:

- Numeric Response Pattern Observation template (templateID: 2.16.840.1.113883.10.20.33.4.4).
- Multiple Choice Response Pattern Observation template (templateID: 2.16.840.1.113883.10.20.33.4.5).
- Text Response Pattern Observation template (templateID: 2.16.840.1.113883.10.20.33.4.6).
- Analog Slider Response Pattern Observation template (templateID: 2.16.840.1.113883.10.20.33.4.7).
- Discrete Slider Response Pattern Observation template (templateID: 2.16.840.1.113883.10.20.33.4.8).

[AND]

This section SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC)

[AND]

This section SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC).

[AND]

This section SHALL contain exactly one [1..1] templateld.

[AND]

This section/templateId SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.33.4.2".

[AND]

This section SHALL contain exactly one [1..1] value.

[AND]

This section SHALL contain exactly one [1..1] @typeCode="REFV" (CodeSystem:

HL7ActRelationshipType 2.16.840.1.113883.5.1002).

[AND]

This section SHALL contain exactly one [1..1] templateld (CONF:150) such that it.

[AND]

This section/templateld SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.33.4.3".

[AND]

The referenceRange SHALL contain exactly one [1..1] observationRange.

[AND]

This observationRange MAY contain zero or one [0..1] text.

[AND]

This observationRange SHALL contain exactly one [1..1] value .

[AND]

This value SHALL contain exactly one [1..1] @xsi:type.

[AND]

This value SHALL contain exactly one [1..1] low.

[AND]

This value SHALL contain exactly one [1..1] high.

[AND]

This section SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC).

[AND]

This section SHALL contain exactly one [1..1] @moodCode="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC),.

[AND]

This section SHALL contain exactly one [1..1] templateId .

[AND]

This section/templateId SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.33.4.4",

[AND]

This section SHALL contain at least one [1..*] id.

[AND]

This section SHALL contain exactly one [1..1] code.

[AND]

This code SHALL contain exactly one [1..1] @code.

[AND]

This code SHALL contain exactly one [1..1] @CodeSystem.

[AND]

This code SHALL contain exactly one [1..1] originalText.

[AND]

This section SHOULD contain zero or one [0..1] languageCode which SHALL be selected from ValueSet Language 2.16.840.1.113883.1.11.11526 DYNAMIC.

[AND]

This section SHALL contain exactly one [1..1] statusCode.

[AND]

This statusCode SHALL contain exactly one [1..1] @code="completed" (CodeSystem:

ActStatus 2.16.840.1.113883.5.14) .

[AND]

This section SHALL contain exactly one [1..1] value.

[AND]

This section SHALL contain exactly one [1..1] @xsi:type, where the value of @xsi:type could be "INT", "REAL" or "TS".

[AND]

This section MAY contain zero or one [0..1] entryRelationship.

[AND]

The entryRelationship, if present, SHALL contain exactly one [1..1] @typeCode="SUBJ" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002).

[AND]

This entryRelationship SHALL contain exactly one [1..1] Question Help Text Pattern Observation template (templateId 2.16.840.1.113883.10.20.32.4.19).

[AND]

This section SHOULD contain zero or one [0..1] entryRelationship.

[AND]

The entryRelationship, if present, SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002).

[AND

This entryRelationship SHALL conform to the Response Media Pattern template (templateId 2.16.840.1.113883.10.20.33.4.2).

[AND]

This section SHOULD contain zero or more [0..*] Response Reference Range Pattern template (templateld 2.16.840.1.113883.10.20.33.4.3).

[AND]

This section SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC).

[AND]

This section SHALL contain exactly one [1..1] @moodCode="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC).

[AND]

This section SHALL contain exactly one [1..1] templateld.

[AND]

This section/templateld SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.33.4.5".

[AND]

This section SHALL contain at least one [1..*] id.

[AND]

This section SHALL contain exactly one [1..1] code.

[AND

This code SHALL contain exactly one [1..1] @code.

[AND]

This code SHALL contain exactly one [1..1] @CodeSystem.

[AND]

This code SHALL contain exactly one [1..1] originalText.

[AND]

This section SHOULD contain zero or one [0..1] languageCode which SHALL be selected from ValueSet Language 2.16.840.1.113883.1.11.11526 DYNAMIC.

[AND]

This section SHALL contain exactly one [1..1] statusCode.

[AND]

This statusCode SHALL contain exactly one [1..1] @code="completed" (CodeSystem: ActStatus 2.16.840.1.113883.5.14).

[AND]

This section SHALL contain at least one [1..*] value

[AND]

This section/value SHALL contain exactly one [1..1] @xsi:type="CE".

[AND]

This section/value SHALL contain exactly one [1..1] @code.

[AND]

This section/value SHALL contain exactly one [1..1] @CodeSystem.

[AND]

This section/value SHALL contain exactly one [1..1] @displayName.

[AND]

This section SHOULD contain zero or many [0..*] entryRelationship.

[AND]

This section/entryRelationship SHALL contain exactly one [1..1] @typeCode="SUBJ" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002).

[AND]

This section/entryRelationship SHALL contain exactly one [1..1] Question Help Text Pattern Observation template (templateId 2.16.840.1.113883.10.20.32.4.19).

[AND]

This section/entryRelationship SHALL contain exactly one [1..1] Question Options Pattern Observation template (templateId 2.16.840.1.113883.10.20.32.4.20).

[AND]

This section SHOULD contain zero or one [0..*] entryRelationship.

[AND]

The entryRelationship, if present, SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002).

IAND.

This entryRelationship SHALL contain exactly one [1..1] Response Media Pattern template (templateId 2.16.840.1.113883.10.20.33.4.2).

[AND]

This entryRelationship SHALL contain exactly one [1..1] Text Response Pattern Observation template (templateId 2.16.840.1.113883.10.20.33.4.6.

[AND]

This section SHALL contain exactly one [1..1] Text Response Pattern Observation template (templateId 2.16.840.1.113883.10.20.33.4.6.

[AND]

This section SHALL contain exactly one [1..1] @moodCode="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC).

[AND]

This section SHALL contain exactly one [1..1] templateld.

This section/templateId SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.33.4.4".

[AND]

This section SHALL contain at least one [1..1] id.

[AND]

This section SHALL contain exactly one [1..1] code.

[AND]

This code SHALL contain exactly one [1..1] @code.

[AND]

This code SHALL contain exactly one [1..1] @CodeSystem.

[AND]

This code SHALL contain exactly one [1..1] originalText.

[AND]

This section SHOULD contain zero or one [0..1] languageCode which SHALL be selected from ValueSet Language 2.16.840.1.113883.1.11.11526 DYNAMIC.

[AND]

This section SHALL contain exactly one [1..1] statusCode.

[AND]

This statusCode SHALL contain exactly one [1..1] @code="completed" (CodeSystem: ActStatus 2.16.840.1.113883.5.14).

[AND]

This section SHALL contain exactly one [1..1] value.

[AND]

This value SHALL contain exactly one [1..1] @xsi:type="ST".

[AND]

This section MAY contain zero or one [0..1] entryRelationship.

[AND]

The entryRelationship, if present, SHALL contain exactly one [1..1] @typeCode="SUBJ" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002).

[AND]

This entryRelationship SHALL contain exactly one [1..1] Question Help Text Pattern Observation template (templateId 2.16.840.1.113883.10.20.32.4.19).

[AND

This section SHOULD contain zero or one [0..1] entryRelationship.

[AND]

The entryRelationship, if present, SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002).

[AND]

This entryRelationship SHALL contain exactly one [1..1] Response Media Pattern template (templateId 2.16.840.1.113883.10.20.33.4.2).

[AND]

This section SHALL conform to the Numeric Response Pattern Observation template (templateId 2.16.840.1.113883.10.20.32.4.6).

[AND]

This section SHALL NOT contain Response Reference Range Pattern template (templateld 2.16.840.1.113883.10.20.32.4.4).

	[AND]	
	This section SHALL contain exactly one [11] templateId.	
	[AND]	
	This templateld SHALL contain exactly one [11] @root="2.16.840.1.113883.10.20.32.4.9".	
	[AND]	
	This section SHALL contain exactly one [11] referenceRange.	
	[AND]	
	This referenceRange SHALL contain exactly one [11] @typeCode="REFV" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002).	
	[AND]	
	The referenceRange SHALL contain exactly one [11] observationRange.	
	[AND]	
	This observationRange SHALL contain exactly one [11] value.	
	[AND]	
	This value SHALL contain exactly one [11] @xsi:type="GLIST_PQ".	
	[AND]	
	This value SHALL contain exactly one [11] head.	
	[AND]	
	This value SHALL contain exactly one [11] increment.	
[AND]		
This value SHALL contain exactly one [11] denominator.		
	[AND]	
	This section SHALL conform to Multiple Choice Response Pattern Observation template (templateId 2.16.840.1.113883.10.20.32.4.7).	
	[AND]	
	This section SHALL contain exactly one [11] templateld.	
	[AND]	
	This templateld SHALL contain exactly one [11] @root="2.16.840.1.113883.10.20.32.4	
	[AND]	
	This section SHALL contain exactly one [11] value.	
	[AND]	
	The value of entryRelationship/observation/value/high/@value SHALL be set to "1" in the Question Options Pattern Observation template (templateId 2.16.840.1.113883.10.20.32.4.20).	
Applicability	C_REC_000 AND C_REC_GEN_004 AND C_REC_GEN_006	
Other PICS		
Initial condition	The Questionnaire Enabled HFS receiver under test has previously submitted a Questionnaire Response document to the simulated HFS application as a response to an HTTP GET operation (TP/HFS/REC/QUE/GEN/BV-003 has been previously executed).	
Test procedure	Make sure that TP/HFS/REC/QUE/GEN/BV-001 has been previously executed, so that the HFS under test has already received a Questionnaire Response document from the HFS receiver under test.	
	2. Check the following elements of the Clinical Document sent by the sender under test:	
	ClinicalDocument element SHALL exactly one [11] realmCode.	
	ClinicalDocument element SHOULD be selected from HL7 ValueSet BindingRealm [2.16.840.1.113883.1.11.20355] from codesystem hl7Realm	

[2.16.840.1.113883.5.1124] STATIC 2010-11-11.

- 3. ClinicalDocument element SHALL contain exactly one [1..1]typeId.
 - This typeId SHALL contain exactly one [1..1] @root="2.16.840.1.113883.1.3".
 - This typeId SHALL contain exactly one [1..1] @extension="POCD-HD-000040".
- ClinicalDocument SHALL contain at least one [1..*] header-level templatedId such that it
 - This templateld SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.29".
 - This templateld SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.33".
- 5. ClinicalDocument SHALL contain exactly one [1..1] id.
- 6. ClinicalDocument SHALL contain exactly one [1..1] code.
- 7. ClinicalDocument SHALL contain exactly one [1..1] title.
- 8. ClinicalDocument SHALL contain exactly one [1..1] effectiveTime.
- ClinicalDocument SHALL contain exactly one [1..1] confidentialityCode, which SHALL be selected from ValueSet HL7 Basic ConfidentialityKind 2.16.840.1.113883.1.11.16926 STATIC 2010-04-21.
- 10. ClinicalDocument SHALL contain exactly one [1..1] languageCode, which SHALL be selected from ValueSet Language 2.16.840.1.113883.1.11.11523 DYNAMIC.
- 11. ClinicalDocument SHALL contain exactly one [1..1] recordTarget.
 - Such recordTargets SHALL contain exactly one [1..1] patientRole.
 - 1. This patientRole SHALL contain at least one [1..*] id.
 - 2. This patientRole SHALL contain at least one [1..1] addr.
 - 3. This patientRole SHALL contain at least one [1..*] telecom.
 - This patientRole SHALL contain exactly one [1..1] patient.
 - This patient SHALL contain exactly one [1..1] name.
 - This patient SHALL contain exactly one [1..1] administrativeGenderCode.
 - c. This patient SHALL contain exactly one [1..1] birthTime.
 - > SHALL be precise to year.
 - > SHOULD be precise to day.
- 12. ClinicalDocument SHALL contain at least one [1..*] author.
 - Such authors SHALL contain exactly one [1..1] time.
 - Such authors SHALL contain exactly one [1..1] assignedAuthor.
 - 1. This assignedAuthor SHALL contain exactly one [1..1] id such that it.
 - The id SHOULD utilize the combined @root and @extension attributes to record the person's or the device's identity in a secure, trusted, and unique way.
 - When the author is a person, this assigned Author SHALL contain exactly one [1..1] code.
 - The code, SHALL contain exactly one [1..1] @code, which SHOULD be selected from the Personal And Legal Relationship Role Type 2.16.840.1.113883.11.20.12.1.
 - 3. This assignedAuthor SHALL contain at least one [1..*] addr.
 - 4. This assignedAuthor SHALL contain at least one [1..*] telecom.
 - There SHALL be exactly one assignedAuthor/assignedPerson or exactly one assignedAuthor/assignedAuthoringDevice.
 - 6. This assignedAuthor SHOULD contain zero or one [0..1] assignedPerson.

- The assignedAuthoringDevice, if present, SHALL contain exactly one [1..1] manufacturerModelName.
- The assignedAuthoringDevice, if present,SHALL contain exactly one [1..1] softwareName.
- If assignedAuthor has an associated representedOrganization with no assignedPerson or assignedAuthoringDevice, then the value for "ClinicalDocument/author/assignedAuthor/id/@NullFlavor" SHALL be "NA" "Not applicable" 2.16.840.1.113883.5.1008 NullFlavor STATIC.
- 13. ClinicalDocument MAY contain zero or one [0..1] dataEnterer.
 - The dataEnterer, if present, SHALL contain exactly one [1..1] assignedEntity.
 - 1. This assignedEntity SHALL contain at least one [1..*] id.
 - 2. This assignedEntity SHALL contain at least one [1..*] addr.
 - 3. This assignedEntity SHALL contain at least one [1..*] telecom.
 - 4. This assignedEntity SHALL contain exactly one [1..1] assignedPerson.
 - a. This assignedPerson SHALL contain at least one [1..*] name.
 - 5. This assignedEntity MAY contain zero or one [0..1] code to encode the relationship of the person to the recordTarget.
- 14. ClinicalDocument MAY contain zero or more [0..*] informant.
 - SHALL contain exactly one [1..1] assignedEntity OR exactly one [1..1] relatedEntity.
 - 1. SHOULD contain at least one [1..*] addr.
 - SHALL contain exactly one [1..1] assignedPerson OR exactly one [1..1] relatedPerson.
 - a. SHALL contain at least one [1..*] name.
 - 3. This assignedEntity MAY contain zero or one [0..1] code.
 - 4. SHOULD contain zero or more [0..*] id
- 15. ClinicalDocument SHALL contain exactly one [1..1] custodian.
 - This custodian SHALL contain exactly one [1..1] assignedCustodian.
 - This assignedcustodian SHALL contain exactly one [1..1] representedCustodianOrganization which may be the person when the document is not maintained by an organization.
 - a. This representedCustodianOrganization SHALL contain at least one [1..*] id.
 - This representedCustodianOrganization SHALL contain exactly one [1..1] name.
 - This representedCustodianOrganization SHALL contain exactly one [1..1] telecom.
 - ➤ This telecom SHOULD contain exactly one [1..1] @use.
 - d. This representedCustodianOrganization SHALL contain at least one [1..*] addr.
- 16. ClinicalDocument MAY contain zero or more[0..*] informationRecipient.
 - The informationRecipient, if present, SHALL contain exactly one [1..1] intendedRecipient.
 - 1. This intendedRecipient SHOULD contain atleast one [1..*] id.
 - 2. This intendedRecipient MAY contain zero or one [0..1] informationRecipient.
 - The informationRecipient, if present, SHALL contain at least one [1..*]
 name.
 - This intendedRecipient MAY contain zero or one [0..1] receivedOrganization.
 - a. The informationRecipient, if present, SHALL contain at least one [1..*]

name.

- 4. This intendedRecipient MAY contain zero or one [0..1] receivedOrganization.
 - a. The receivedOrganization, if present, SHALL contain exactly one [1..1] name.
- 17. ClinicalDocument SHOULD contain zero or one [0..1] legalAuthenticator.
 - The legalAuthenticator, if present, SHALL contain exactly one [1..1] time.
 - The legalAuthenticator, if present, SHALL contain exactly one [1..1] signatureCode.
 - 1. This signatureCode SHALL contain exactly one [1..1] signatureCode.
 - a. This signatureCode SHALL exactly one [1..1]
 @code="S"(CodeSystem: Participationsignature 2.16.840.1.113883.5.89).
 - The legalAuthenticator, if present, SHALL contain exactly one [1..1] assignedEntity.
 - 1. This assignedEntity SHALL contain at least one [1..*] id.
 - 2. This assignedEntity MAY contain zero or one [0..1] code.
 - 3. This assignedEntity SHALL contain at least one [1..*] addr.
 - 4. This assignedentity SHALL contain at least one [1..*] telecom.
 - 5. This assignedEntity SHALL contain exactly one [1..1] assignedPerson.
 - a. This assignedPerson SHALL contain at least one [1..*] name.
- 18. ClinicalDocument MAY contain zero or more [0..*] authenticator.
 - The authenticator, if present, SHALL contain exactly one [1..1] time.
 - The authenticator, if present, SHALL contain exactly one [1..1] signatureCode.
 - This signatureCode SHALL contain exactly one [1..1] @code="S" (CodeSystem: Participationsignature 2.16.840.1.113883.5.89).
 - The authenticator, if present, SHALL contain exactly one [1..1] assignedEntity.
 - 1. This assignedEntity SHALL contain at least one [1..*] id.
 - 2. This assignedEntity MAY contain zero or one [0..1] code.
 - 3. This assignedEntity SHALL contain at least one [1..*] addr.
 - 4. This assignedEntity SHALL contain at least one [1..*] telecom.
 - a. Such telecoms SHOULD contain exactly one [1..1] @use.
 - 5. This assignedEntity SHALL contain exactly one [1..1] assignedPerson.
 - a. This assignedPerson SHALL contain at least one [1..*] name.
- 19. ClinicalDocument MAY contain zero or more [0..*] participant.
 - The participant, if present, MAY contain zero or one [0..1] time.
 - Such participants, if present, SHALL have an associatedPerson or scopingOrganization element under participant/associatedEntity.
 - Unless otherwise specified by the document specific header constraints, when participant/@typeCode is IND, associatedEntity/@classCode SHALL be selected from ValueSet 2.16.840.1.113883.11.20.9.33 INDRoleclassCodes STATIC 2011-09-30.
- 20. ClinicalDocument SHOULD contain zero or one [0..1] inFulfillmentOf.
 - The inFulfillmentOf, if present, SHALL contain exactly one [1..1] order.
 - 1. This order SHALL contain at least one [1..*] id.
- 21. ClinicalDocument MAY contain zero or one [0..1] componentOf.
 - The componentOf, if present, SHALL contain exactly one [1..1] encompassingEncounter.

- 1. This encompassingEncounter SHALL contain at least one [1..*] id.
- This encompassingEncounter SHALL contain exactly one [1..1] effectiveTime.
- 22. SHALL conform to the Universal Realm Questionnaire Response Document Header template (templateld: 2.16.840.1.113883.10.20.33).
- 23. Patient generated Questionnaire Response Document in US Realm SHOULD conform to the US Realm Patient Generated Document Header template (templateld: 2.16.840.1.113883.10.20.29.1).
- 24. Clinicians generated Questionnaire Response Document in US realm SHOULD conform to the US C-CDA General Header template (templateld: 2.16.840.1.113883.10.20.22.1.1).
- 25. SHALL contain exactly one [1..1] templateld such that it.
 - SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.33.1.1".
- 26. SHALL contain exactly one [1..1] component.
 - SHALL contain exactly one [1..1] structuredBody.
 - This structuredBody SHALL contain at least one [1..*] component such that it.
 - a. SHALL contain exactly one [1..1] Questionnaire Response Section template (templateId: '2.16.840.1.113883.10.20.33.1.1').
 - b. SHALL contain exactly one [1..1] Copy Right Section template (templateld: 2.16.840.1.1113883.10.20.32.2.2).
- 27. SHALL contain exactly one [1..1] templateld such that it.
 - SHALL contain exactly one [1..1] code.
- 28. SHALL contain exactly one [1..1] code.
- 29. SHOULD contain zero or one [0..1] title.
- 30. SHALL contain exactly one [1..1] text.
- 31. SHOULD contain zero or one [0..1] languageCode which SHALL be selected from ValueSetLanguage 2.16.840.1..113883.1.11.11523 DYNAMIC.
- 32. SHALL contain at least one [1..*] entry such that it.
 - SHALL contain exactly one [1..1] @typeCode="DRIV".
 - SHALL contain exactly one [1..1] Responses Organizer template (templateld: 2.16.840.1.113883.10.20.33.4.1).
- 33. SHALL contain exactly one [1..1] @classCode="BATTERY" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC).
- 34. SHALL contain exactly one [1..1] @moodcode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC).
- 35. SHALL contain exactly one [1..1] templateld such that it .
 - SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.33.4.1".
- 36. SHALL contain at least one [1..*] id.
- 37. SHOULD contain zero or one [0..1] code.
- 38. SHALL contain exactly one [1..1] statusCode.
 - This statusCode SHALL contain exactly one [1..1]
 @code="completed"(CodeSystem: ActStatus 2.16.840.1.11383.5.14).
- 39. SHALL contain at least one [1..*] component such that it.
 - SHALL contain exactly one [1..1] sequenceNumber.
 - SHALL contain exactly one [1..1] of the following template (templateID: 2.16.840.1.113883.10.20.33.4.5).
 - Numeric Response Pattern Observation template (templateID: 2.16.840.1.113883.10.20.33.4.4).

- 2. Multiple Choice Response Pattern Observation template (templateID: 2.16.840.1.113883.10.20.33.4.5).
- 3. Text Response Pattern Observation template (templateID: 2.16.840.1.113883.10.20.33.4.6).
- 4. Analog Slider Response Pattern Observation template (templateID: 2.16.840.1.113883.10.20.33.4.7).
- 5. Discrete Slider Resposne Pattern Observation template (templateID: 2.16.840.1.113883.10.20.33.4.8).
- 40. SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC).
- 41. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC).
- 42. SHALL contain exactly one [1..1] templateld such that it.
 - SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.33.4.2".
- 43. SHALL contain exactly one [1..1] value.
- 44. SHALL contain exactly one [1..1] @typeCode="REFV" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002).
- 45. SHALL contain exactly one [1..1] templateld such that it.
 - SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.33.4.3".
- 46. The referenceRange SHALL contain exactly one [1..1] observationRange.
 - MAY contain zero or one [0..1] text.
 - SHALL contain exactly one [1..1] value such that it.
 - 1. SHALL contain exactly one [1..1] @xsi:type.
 - 2. SHALL contain exactly one [1..1] low.
 - 3. SHALL contain exactly one [1..1] high.
- 47. SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC).
- 48. SHALL contain exactly one [1..1] @moodCode="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC).
- 49. SHALL contain exactly one [1..1] templateld such that it.
 - SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.33.4.4".
- 50. SHALL contain at least one [1..*] id.
- 51. SHALL contain exactly one [1..1] code.
 - This code SHALL contain exactly one [1..1] @code.
 - This code SHALL contain exactly one [1..1] @CodeSystem.
 - This code SHALL contain exactly one [1..1] originalText.
- 52. SHOULD contain zero or one [0..1] languageCode which SHALL be selected from ValueSet Language 2.16.840.1.113883.1.11.11526 DYNAMIC.
- 53. SHALL contain exactly one [1..1] statusCode.
 - This statuscode SHALL contain exactly one [1..1]
 @code="completed"(CodeSystem: ActStatus 2.16.840.1.113883.5.14).
- 54. SHALL contain exactly one [1..1] value.
 - SHALL contain exactly one [1..1] @xsi:type,where the value of @xsi:type could be "INT", "REAL" or "TS".
- 55. MAY contain zero or one [0..1] entryRelationship.
 - The entryRelationship, if present, SHALL contain exactly one [1..1] @typeCode="SUBJ" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002).

- SHALL contain exactly one [1..1] Question Help Text Pattern Observation template (templateId 2.16.840.1.113883.10.20.32.4.19).
- 56. SHOULD contain zero or one [0..1] entryRelationship.
 - The entryRelationship, if present, SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002).
 - SHALL conform to the Response Media Pattern template (templateld 2.16.840.1.113883.10.20.33.4.2).
- 57. SHOULD contain zero or more [0..*] Response Reference Range Pattern template (templateId 2.16.840.1.113883.10.20.33.4.3).
- 58. SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC).
- 59. SHALL contain exactly one [1..1] @moodCode="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC).
- 60. SHALL contain exactly one [1..1] templateld such that it.
 - SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.33.4.5".
- 61. SHALL contain at least one [1..*]] id.
- 62. SHALL contain exactly one [1..1] code.
 - This code SHALL contain exactly one [1..1] @code.
 - This code SHALL contain exactly one [1..1] @CodeSystem.
 - This code SHALL contain exactly one [1..1] originalText.
- 63. SHOULD contain zero or one [0..1] languageCode which SHALL be selected from ValueSet Language 2.16.840.1.113883.1.11.11526 DYNAMIC.
- 64. SHALL contain exactly one [1..1] statusCode.
 - This statusCode SHALL contain exactly one [1..1] @code="completed" (CodeSystem: ActStatus 2.16.840.1.113883.5.14).
- 65. SHALL contain at least one [1..*] value.
 - SHALL contain exactly one [1..1] @xsi:type="CE".
 - SHALL contain exactly one [1..1] @code.
 - SHALL contain exactly one [1..1] @CodeSystem.
 - SHALL contain exactly one [1..1] @displayName such that it.
- 66. SHOULD contain zero or many [0..*] entryRelationship such that it.
 - SHALL contain exactly one [1..1] @typeCode="SUBJ" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002).
 - SHALL contain exactly one [1..1] Question Help Text Pattern Observation template (templateId 2.16.840.1.113883.10.20.32.4.19).
 - SHALL contain exactly one [1..1] Question Options Pattern Observation template (templateId 2.16.840.1.113883.1020.32.4.20).
- 67. SHOULD contain zero or one [0..*] entryRelationship.
 - The entryRelationship, if present, SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002).
 - SHALL contain exactly one [1..1] Response Media Pattern template (templateld 2.16.840.1.113883.10.20.33.4.2).
 - SHALL contain exactly one [1..1] Text Response Pattern Observation template (templateId 2.16.840.1.113883.10.20.33.4.6).
- 68. SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7A ctClass 2.16.840.1.113883.5.6 STATIC).
- 69. SHALL CONTAIN EXACTLY ONE [1..1] @moodcode="EVN" (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC).

- 70. SHALL contain exactly one [1..1] templateld such that it.
 - SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.33.4.4".
- 71. SHALL contain at least one [1..1] id.
- 72. SHALL contain exactly one [1..1] code.
 - This code SHALL contain exactly one 1..1] @code.
 - This code SHALL contain exactly one [1..1] @CodeSystem.
 - This code SHALL contain exactly one [1..1] originalText.
- 73. SHOULD contain zero or one [0.1] languageCode which SHALL be selected from ValueSet Language 2.16.840.1.113883.1.11.11526 DYNAMIC.
- 74. SHALL contain exactly one [1..1] statusCode.
 - This Statuscode SHALL contain exactly one [1..1] @code="completed" (CodeSystem: ActStatus 2.16.840.1.11388.5.14).
- 75. SHALL contain exactly one [1..1] value.
 - SHALL contain exactly one [1..1] @xsi:type="ST".
- 76. MAY contain zero or one [0..1] entryRelationship.
 - The entryRelationship, if present, SHALL contain exactly one [1..1] @typeCode="SUBJ" (CodeSystem: HL7ActrelationshipType 2.16.840.1.113883.5.1002).
 - SHALL contain exactly one [1..1] Question Help Text Pattern Observation template (templateld 2.16.840.1.113883.10.20.32.4.19).
- 77. SHOULD contain zero or one [0..1] entryRelationship.
 - The entryRelationship,if present, SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002).
 - SHALL contain exactly one [1..1] Response Media Pattern template (templateld 2.16.840.1.113883.10.20.33.4.2).
- 78. SHALL conform to the Numeric Response Pattern Observation template(templateId 2.16.840.1.113883.10.20.32.4.6).
- 79. SHALL NOT contain Response Reference Range Pattern template (template 2.16.840.1.113883.10.20.32.4.6).
- 80. SHALL contain exactly one [1..1] templateld such that it.
 - SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.9".
- 81. SHALL contain exactly one [1..1] referenceRange.
 - SHALL contain exactly one [1..1] @typeCode="REFV" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002).
 - The referenceRange SHALL contain exactly one [1..1] observationRange.
 - 1. SHALL contain exactly one [1..1] value such that it.
 - a. SHALL contain exactly one [1..1] @xsi:type="GLIST_PQ".
 - b. SHALL contain exactly one [1..1] head.
 - c. SHALL contain exactly one [1..1] increment.
 - d. SHALL contain exactly one [1..1] denominator.
- 82. SHALL conform to Multiple Choice Response Pattern Observation template (templateId 2.16.840.1.113883.10.20.32.4.7).
- 83. SHALL contain exactly one [1..1] templateld such that it.
 - SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.32.4.10".
- 84. SHALL contain exactly one [1..1] value.
- 85. The value of entryRelationship/observation/value/high/@value SHALL be set to "1" in the Question Options Pattern Observation template (templateId

	2.16.840.1.113883.10.20.32.4.20)
Pass/Fail criteria	The submitted Questionnaire Response is compliant with HL7 Implementation Guide for CDA R2: Questionnaire Response Document, Release 1 [HL7 CDA QRD] as described above.
Notes	

A.4 Subgroup 2.7.3: hData record format (HRF)

A.4 Su	ogroup 2.	7.3: hData record formation	t (HRF)		
TP ld		TP/HFS/REC/QUE/HRF/BV-000			
TP label		Questionnaire. Root file elements.			
Coverage	Spec	[ITU-T H.812]			
	Testable items	CommonReq 5;M			
	Spec	[ITU-T H.812.2]			
	Testable items	Question 11;M	Question 12;M		
	Spec	[HL7 V3 HRF]			
	Testable items	Root 9;M	Root 10;M	Root 11;M	
	items	Root 12;M	Root 13;M	Root 14;M	
		Root 15;M	Root 16;M	Root 18;M	
		Root 19;M	Root 20;M	Root 22;M	
Test purpose		Check that:			
		SUT declares required and recommended questionnaire capabilities in its root file according to hData Record Format.			
Applicability C_REC_000 AND		C_REC_000 AND C_REC_GE	EN_004 AND C_REC_GEN_006		
Other PICS		C_REC_GEN_005			
Initial condition		The simulated HFS application using hData observation upload is ready to check the SUT Questionnaire capabilities declared in its root file. The SUT has previously provided a base URL.			
Test procedure		The simulated HFS application performs an HTTP GET of root.xml using TLS v.1.1. OAuth 2.0 token is not required.			
		The simulated HFS application root.xml file.	cation obtains and check required	d Questionnaire capabilities in	
Pass/Fail criteria		The HFS application under test supports capability exchange as specified in [ITU-T H.812.3].			
		The HFS application provi	ides root.xml file.		
		1.profile a. id="questi b. reference=	http://handle.itu.int	/11.1002/3000/	
		2.section	re/2016/01/H.812.2.pd	f	
		a. path="ques	tionnaires"		

```
b. profileID= "questionnaire"
                          c. resourceTypeId=" questionnaire"
                      3.resourceType
                          a. resourceTypeId=" questionnaire"
                          b. reference="http://www.hl7.org/dstucomments/
                      showdetail.cfm?dstuid=116"
                          c. representation
                              i. mediaType="application/xml"
                      Additionally, the simulated HFS application checks that questionnaire response capability
                      elements are as shown:
                      1.profile
                          a. id="questionnaireResponse"
                          b. reference=http://handle.itu.int/11.1002/3000/
                      hData/Questionnaire/2016/01/H.812.2.pdf
                      2.section
                          a. path="questionnaireResponses"
                          b. profileID="questionnaireResponse"
                          c. resourceTypeId="questionnaireResponse"
                      3.resourceType
                          a. resourceTypeId="questionnaireResponse"
                          b. reference="http://www.hl7.org/dstucomments/
                      showdetail.cfm?dstuid=117"
                          c. representation
                              i. mediaType="application/xml"
Notes
```

Bibliography

[b-ITU-T H.810 (2013)]	Recommendation ITU-T H.810 (2013), <i>Interoperability design</i> guidelines for personal health systems.
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[b-CDG 1.0]	Continua Health Alliance, Continua Design Guidelines v1.0 (2008), <i>Continua Design Guidelines</i> .
[b-CDG 2010]	Continua Health Alliance, Continua Design Guidelines v1.5 (2010), <i>Continua Design Guidelines</i> .
[b-CDG 2011]	Continua Health Alliance, Continua Design Guidelines (2011), "Adrenaline", <i>Continua Design Guidelines</i> .
[b-CDG 2012]	Continua Health Alliance, Continua Design Guidelines (2012), "Catalyst", <i>Continua Design Guidelines</i> .
[b-CDG 2013]	Continua Health Alliance, Continua Design Guidelines (2013), "Endorphin", <i>Continua Design Guidelines</i> .
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[b-ETSI SR 001 262]	ETSI SR 001 262 v1.8.1 (2003), ETSI drafting rules. https://docbox.etsi.org/MTS/MTS/10-PromotionalMaterial/MBS-20111118/Referenced%20Documents/Drafting%20Rules.pdf
[b-HFSR PICS & PIXIT]	Services HFS Receiver DG2016 PICS and PIXIT excel sheet v1.7. http://handle.itu.int/11.1002/2000/12067
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