EMR Certification

eHealth_hub - Home Clinic Client Summary Service Specification

March 31, 2020 Version 1.2





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1 Introduction

The purpose of this document is to provide an overview of the eHealth_hub - Home Clinic Client Summary service (hereafter referred to as the "Client Summary Service"). The document will describe the high-level architecture of the data submission model, as well as the technical details and requirements regarding the web service and web service security.

1.1 Glossary

The following defines key business terms and acronyms used throughout this document.

Table 1: Terms and Acronyms

	Table 1. Terms and Actoryms					
TERM OR ACRONYM	DEFINITION					
Client	A client is an individual seeking and receiving health-care services. May be interchanged with term "patient".					
Client Summary Data	The EMR data elements required to generate a Client Summary Document. All of the Client Summary Data elements are listed in the specification requirements. All of the Client Summary Data elements are listed in <u>5.7 – Data Capture Requirements and Triggers</u> .					
Client Summary Data Message	The message generated by the EMR containing Client Summary Data to be submitted to the Client Summary Service.					
Client Summary Document	A document that contains a subset of patient health information provided by the Home Clinic – like health history and prescribed medications – for patients enrolled to the clinic. The document is presented in a consistent format and is electronically accessible to authorized health-care providers in eChart Manitoba across the province.					
Client Summary Validation Messages	Messages available for EMRs to pick up once per day, following the processing of Client Summary Data submitted by Home Clinics.					
eChart Manitoba, or "eChart"	A provincial, client centric record of key health information about an individual over a long time period, not a detailed record of care, which complements point of care systems and is dependent on information from existing electronic sources.					
eHealth_hub	A Shared Health business service that coordinates electronic delivery of information between systems to authorized health-care providers who are using a Manitoba Certified EMR.					
eHealth_hub – Home Clinic Client Summary Service, or "Client Summary	A service providing EMR users with the ability to submit Client Summary Data in order to produce a Client Summary Document.					



Service"	
eHealth_hub – Home Clinic Enrolment Service , or "Enrolment Service"	A service providing EMR users with the ability to submit Home Clinic Enrolment data, receive real-time validation of enrolment data submissions, and distribute enrolment remediation messages to Home Clinics.
eHealth_hub Home Clinic Mailbox	An eHealth_hub message queue containing Client Summary Validation Messages available for retrieval by the Home Clinic's EMR. Manitoba Certified EMR Products will poll and retrieve these messages from this source.
EMR Identifier, or EMR ID	A unique identifier assigned to each EMR instance by Shared Health.
Enrolment, or "enrolled"	The process by which a client is recognized to have a Home Clinic as their primary provider of care and the Home Clinic agrees to provide comprehensive continuous primary care and to coordinate care with other health-care providers.
Health Information Access Layer, or "HIAL"	Shared Health's core integration service which provides the environment and capabilities necessary to establish interoperability between systems. For example, HIAL is a Shared Health Service that enables Business Services such as eHealth_hub.
Home Clinic	A client-centred primary care clinic that serves as a client's home base within the health-care system. Home Clinics are primary care clinics that provide clients with timely access to care, coordinate their health care within the health-care system, and manage their health-care records. Having a home base helps support comprehensive and continuous care throughout a clients' life.
	The composition of a Home Clinic may take many different forms based on the decisions made by the clinic and its eligible providers. Refer to the eHealth_hub – Home Clinic Enrolment Service Interface Specification for examples.
Home Clinic EMR User	An EMR user working on behalf of a Home Clinic.
Home Clinic Remediation List	A common area in the Manitoba Certified EMR Product where EMR users can view and action Home Clinic related remediation and validation messages retrieved from services such as the Client Summary Service and the Home Clinic Enrolment Service.
Main Primary Care	A health-care provider (family physician or nurse practitioner)



Provider, also referred to as: "Associated Provider"	within the Client's Home Clinic, who has the lead role and medico-legal responsibility for overseeing the enrolled Client's care. In the context of the Home Clinic model, this provider is known as the main Primary Care Provider (formerly Most Responsible Provider, MRP).
Manitoba Certified EMR Product (EMR)	An Electronic Medical Record product that has achieved Certification in Manitoba, and is referred to throughout this document as "EMR".
Shared EMR Instance	An EMR instance that is used by more than one clinic. For example, in a regional shared instance, many clinics, including primary care clinics, may 'share' information. The user configurations can vary, but commonly client information is shared (accessed and/or updated) by users across the entire instance.
Simple Object Access Protocol (SOAP)	SOAP is a messaging protocol that allows programs that run on disparate operating systems (such as Windows and Linux) to communicate using Hypertext Transfer Protocol (HTTP) and its Extensible Markup Language (XML).

1.2 Business Objectives & Benefits Summary

The Client Summary Service produces a standardized Client Summary Document for each client enrolled with a Home Clinic in the EMR. Client Summary Documents are securely sent based on predetermined triggers to Shared Health and are stored in the eChart Manitoba Clinical Data Repository (CDR). The Client Summary Document is then retrieved from the CDR when searched by authorized health-care providers who are users of eChart Manitoba, in support of direct patient care.

1.3 Related Documents

This document references the following companion documents:

Table 2: Related Documents

DOCUMENT
Manitoba EMR Certification – Baseline EMR Requirements Specification
Manitoba EMR Certification – eHealth hub – Home Clinic Enrolment Service Interface Specification ("Enrolment Service")
eHealth_hub – Authentication Specification
eHealth_hub - Home Clinic Client Summary Service Assessment Guide
eHealth_hub - Home Clinic Client Summary Service Assessment Addendum

Upon application for EMR Certification to this specification, Vendors can email EMR@sharedhealthmb.ca or contact their EMR Product Lead to request the additional



assessment addendum containing additional configuration and connectivity details necessary for assessment.

2 Client Summary Service Overview

The Client Summary Service enables EMRs to share key primary care data with other providers via integration with eChart Manitoba.

Other key solution features in scope include:

- Configuration of a Home Clinic, or multiple Home Clinics within the EMR (as defined in the Enrolment Service Specification);
- Inclusion of a defined set of Client Summary Data elements in the EMR, as defined in <u>5.7 - Data Capture Requirements and Triggers</u>, which largely draw from existing client data elements defined in the Baseline Specification;
- Submission, on a scheduled basis of Client Summary Data from the EMR to the Client Summary Service; and
- Management of Client Summary Validation Messages, as retrieved by the EMR each day from the Client Summary Service



3 High-level Architecture

EMRs using the Client Summary Service will connect through the Health Information Access Layer (HIAL) to submit Client Summary Data to the Client Summary Service and retrieve Client Summary Validation Messages addressed to the Home Clinic.

Figure 1 below shows that the EMR Identifier and the Home Clinic ID are the key identifiers required for a Home Clinic to submit Client Summary Data to the Client Summary Service and for the Home Clinic to retrieve Client Summary Validation Messages.

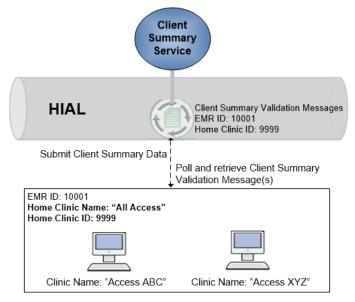


FIGURE 1: CLIENT SUMMARY SERVICE OVERVIEW

The sequence diagram in Figure 2 describes the synchronous request and response mechanism used to interface with the Client Summary Service:

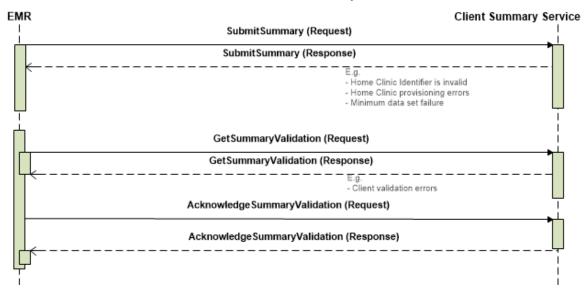


FIGURE 2: CLIENT SUMMARY SERVICE SEQUENCE DIAGRAM



The Home Clinic is expected to submit Client Summary Data Message(s) to the Client Summary Service each day. With each submission, the EMR invokes the <u>SubmitSummary operation</u> with a secure message containing Client Summary Data. Following this action, the EMR receives real-time preliminary validation response(s) indicating the validity of the Client Summary Data submission(s).

Each day, the EMR is also expected to invoke the <u>GetSummaryValidation</u> operation for Home Clinic(s) within the EMR instance in order to retrieve Client Summary Validation Messages. This process involves polling the eHealth_hub Home Clinic Mailbox for the list of applicable messages addressed to the Home Clinic.

The EMR invokes the <u>AcknowledgeSummaryValidation</u> operation after it has successfully received and processed the Client Summary Validation Messages. This informs the Client Summary Service that Client Summary Validation Messages have been received by the EMR and can now be purged from the eHealth_hub Home Clinic Mailbox. Once in the EMR, Client Summary Validation Messages are made available for Home Clinic EMR users to remediate when they deem appropriate.



4 Client Summary Service Use Cases

The use cases in this section describe functionality required of the EMR product. They are supported by the requirements detailed in this specification.

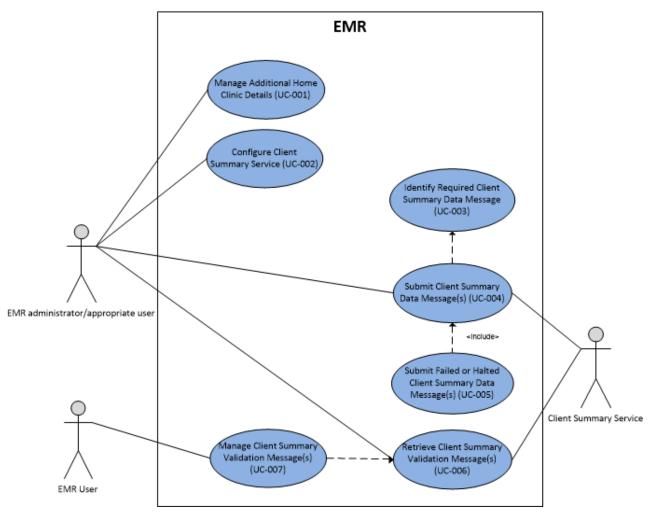


FIGURE 3: HIGH-LEVEL USE CASES



4.1 Manage Additional Home Clinic Details (UC-001)

Home Clinic Details are described in the Enrolment Service Specification. This use case describes functionality to manage the additional Home Clinic Details required for the Client Summary Service.

PRIMARY ACTORS

- EMR
- EMR administrator/appropriate user

TRIGGER(S)

• EMR administrator/appropriate user wishes to configure Home Clinic details

PRE-CONDITIONS / INPUTS

• EMR has Enrolment Service functionality available

POST-CONDITIONS / OUTPUTS

• EMR maintains the state of the Home Clinic details

MAIN SUCCESS SCENARIO (BASIC FLOW)

- 1. EMR administrator/appropriate user accesses the appropriate Home Clinic Details function in the EMR.
- 2. EMR displays the Home Clinic details, including the Home Clinic Phone.
- 3. EMR administrator/appropriate user enters and saves Home Clinic details.
- 4. EMR saves the Home Clinic details.

4.2 Configure Client Summary Service (UC-002)

This use case describes the process to configure the Client Summary Service functionality in the EMR.

PRIMARY ACTORS

- EMR
- EMR administrator/appropriate user

TRIGGER(S)

 EMR administrator/appropriate user has a need to configure the Client Summary Service functionality in the EMR

PRE-CONDITIONS / INPUTS

- Client Summary Service is provisioned for the Home Clinic
- Home Clinic has been set up in the EMR
- EMR functionality has met the certification, business and technical requirements to leverage the Client Summary Service
- Security certificates are installed and communication successfully tested in the EMR



POST-CONDITIONS / OUTPUTS

- Client Summary Service is either enabled or disabled in the EMR for a Home Clinic
- Configurable periodic time(s) of submission of Client Summary Data and of polling of Client Summary Validation Messages are defined

MAIN SUCCESS SCENARIO (BASIC FLOW)

- 1. EMR administrator/appropriate user enables the Client Summary Service for a Home Clinic in the EMR.
- 2. EMR enables the Client Summary Service for a Home Clinic.
- 3. EMR administrator/appropriate user defines the following information:
 - a) Time of daily submission of Client Summary Data from the EMR to the Client Summary Service
 - b) Time of daily **polling** of the eHealth_hub Home Clinic Mailbox(es) for the retrieval of Client Summary Validation Messages
- 4. EMR saves the configurable periodic time(s) of submission of Client Summary Data and polling of Client Summary Validation Messages.

ALTERNATE FLOWS

A1 – Disable the Client Summary Service

- 1. EMR administrator/appropriate user disables the Client Summary Service for a Home Clinic in the EMR.
- 2. EMR disables the Client Summary Service for a Home Clinic.

A2 - Manage the Configurable Periodic Time of Submission and Polling

- 1. EMR administrator/appropriate user defines the following information:
 - a) Time of daily submission of Client Summary Data from the EMR to the Client Summary Service
 - b) Time of daily **polling** of the eHealth_hub Home Clinic Mailbox(es) for the retrieval of Client Summary Validation Messages
- 2. EMR saves the configurable periodic time(s) of submission of Client Summary Data and polling of Client Summary Validation Messages.

4.3 Identify Required Client Summary Data Message (UC-003)

This use case describes the functionality in the EMR to identify the required Client Summary Data Message for a client.

PRIMARY ACTORS

• EMR



TRIGGER(S)

An update has occurred to a client record

PRE-CONDITIONS / INPUTS

- Client Summary Service is provisioned for the Home Clinic
- Client Summary Service is enabled in the EMR

POST-CONDITIONS / OUTPUTS

 EMR has identified the required Client Summary Data Message to be submitted to the Client Summary Service

MAIN SUCCESS SCENARIO (BASIC FLOW)

1. EMR identifies that the updates require a Client Summary Data Message.

ALTERNATE FLOWS

A1 - No Client Summary Data Message is Required

1. EMR identifies that the updates do not require a Client Summary Data Message.

4.4 Submit Client Summary Data Message(s) (UC-004)

This use case describes the functionality for the EMR to send Client Summary Data to the Client Summary Service.

PRIMARY ACTORS

- EMR
- Client Summary Service

TRIGGER(S)

- Client Summary Data Message(s) are ready to be sent to the Client Summary Service
- Configured, scheduled Client Summary Data submission time has occurred or the EMR administrator/appropriate user has triggered the submission of Client Summary Data on demand, or failed or halted Client Summary Data Message(s) are ready to be submitted

PRE-CONDITIONS / INPUTS

- Client Summary Service is provisioned for the Home Clinic
- Client Summary Service is enabled in the EMR

POST-CONDITIONS / OUTPUTS

• Client Summary Data Message(s) are submitted to the Client Summary Service

MAIN SUCCESS SCENARIO (BASIC FLOW)

1. EMR loops through all of the client(s) which require a Client Summary Data



Message submission as follows:

- a) EMR generates or references the most recent Client Summary Data Message using the defined grouping, sorting and filtering rules
- b) EMR sends the Client Summary Data Message to the Client Summary Service using the <u>SubmitSummary operation</u>
- c) Client Summary Service receives the request and sends a successful validation response to the EMR
- d) EMR receives and saves the response
- 2. EMR completes Submit Client Summary Data Message process.

EXCEPTION FLOWS

E1 - EMR is unable to connect to Client Summary Service

Start Exception Flow at:

- Basic Flow After Step 1b
- Client Summary Service receives the request and sends a server or authentication error to the EMR or EMR is unable to make a successful <u>SubmitSummary</u> <u>operation</u> request.
- 2. EMR receives the connectivity error details and saves the error details.
- 3. EMR halts further submission of Client Summary Data Message(s) and identifies all clients which have either failed or have been halted for submission.

E2 – EMR receives an error that is not a server or an authentication error from the Client Summary Service (e.g. a business validation error)

Start Exception Flow at:

- Basic Flow After Step 1b
- 1. Client Summary Service receives the request and sends the response indicating a Client Summary Data submission validation failure.
- 2. Rejoin Basic Flow at Step 1d.

4.5 Submit Failed or Halted Client Summary Data Message(s) (UC-005)

This use case describes the functionality for the EMR to send previously failed or halted Client Summary Data Message(s) to the Client Summary Service.

PRIMARY ACTORS

- EMR
- EMR administrator/appropriate user



TRIGGER(S)

- Connectivity to the Client Summary Service is restored
- EMR has identified client(s) which have either failed or have been halted for submission to the Client Summary Service

PRE-CONDITIONS / INPUTS

- Client Summary Service is provisioned for the Home Clinic.
- Client Summary Service is enabled within the EMR

Post-Conditions / Outputs

 Previously halted or failed Client Summary Data Message(s) are submitted to the Client Summary Service

MAIN SUCCESS SCENARIO (BASIC FLOW)

- 1. EMR administrator/appropriate user or EMR attempts to submit Client Summary Data Message(s) for client(s) who have had a previously failed or halted submission.
- 2. Follow Submit Client Summary Data Message(s) (UC-004).

4.6 Retrieve Client Summary Validation Message(s) (UC-006)

This use case describes EMR functionality to poll and retrieve Client Summary Validation Messages addressed to a Home Clinic.

PRIMARY ACTORS

- EMR
- EMR administrator/appropriate user
- Client Summary Service

TRIGGER(S)

 Configured, scheduled Client Summary Validation Message polling time has occurred or, the EMR administrator/appropriate user has invoked Client Summary Validation Message retrieval on demand

PRE-CONDITIONS / INPUTS

- Client Summary Service is provisioned for the Home Clinic
- Client Summary Service is enabled in the EMR

POST-CONDITIONS / OUTPUTS

 EMR receives all available Client Summary Validation Message(s) from the Client Summary Service

MAIN SUCCESS SCENARIO (BASIC FLOW)

1. EMR invokes the GetSummary Validation operation.



- 2. Client Summary Service receives the request and sends response containing Client Summary Validation Message(s).
- 3. EMR receives the response and checks for additional Client Summary Validation Messages.
- 4. EMR sends acknowledgement of receipt using the *AcknowledgeSummaryValidation* operation.
- 5. Client Summary Service receives acknowledgement and sends response to EMR.
- 6. EMR receives response and delivers each Client Summary Validation Message to the appropriate Home Clinic Remediation List.

EXCEPTION FLOWS

E1 – Home Clinic has more than 25 Client Summary Validation Messages to retrieve from Client Summary Service:

Start Exception Flow at:

- Basic Flow After Step 3
- 1. EMR sends acknowledgement of receipt using the *AcknowledgeSummaryValidation* operation.
- 2. Client Summary Service receives acknowledgement and sends response to EMR.
- 3. EMR receives response and delivers each Client Summary Validation Message to the appropriate Home Clinic Remediation List.
- 4. Rejoin Basic Flow at Step 1.

E2 – EMR is unable to connect or receives and error from the Client Summary Service:

Start Exception Flow at either:

- Basic Flow After Step 1
- Basic Flow After Step 4
- 1. EMR logs the error in the EMR interface log.

E3 – EMR has not sent back an acknowledgement for a prior request for Client Summary Validation Messages:

Start Exception Flow at:

- Basic Flow After Step 2
- 1. EMR receives response containing the set of messages that the EMR has not previously acknowledged.
- 2. EMR does not reload or duplicate the Client Summary Validation Messages already received.
- 3. EMR logs error in the EMR interface log.



4.7 Manage Client Summary Validation Message(s) (UC-007)

This use case describes EMR functionality for an EMR user to manage successful validation responses, errors in business validation, and errors in system/server connectivity.

PRIMARY ACTORS

- EMR
- EMR User

TRIGGER(S)

 EMR User has a need to remediate Client Summary Validation Message(s) in the EMR

PRE-CONDITIONS / INPUTS

 EMR has retrieved Client Summary Validation Message(s) from the Client Summary Service

POST-CONDITIONS / OUTPUTS

• Client Summary Validation Message(s) have been remediated by the EMR User and no longer appear on the Home Clinic Remediation List

MAIN SUCCESS SCENARIO (BASIC FLOW)

- 1. EMR User accesses the Home Clinic Remediation List and performs the following:
 - a) Views the Client Summary Validation Message(s)
 - b) Selects one of the Client Summary Validation Messages to remediate
 - c) Accesses the client record directly from the Home Clinic Remediation List.
 - d) Updates the client record
 - e) Clears the remediated Client Summary Validation Message from the Home Clinic Remediation List
- 2. EMR clears the remediated Client Summary Validation Message from the Home Clinic Remediation List.

ALTERNATE FLOWS

A1 - No Client Record Changes are Required

- 1. EMR User accesses the Home Clinic Remediation List and performs the following:
 - a) Views the Client Summary Validation Message(s)
 - b) Selects one of the Client Summary Validation Messages to remediate
 - Clears the remediated Client Summary Validation Message from the Home Clinic Remediation List
- 2. EMR clears the remediated Client Summary Validation Message from the Home Clinic Remediation List.



5 Requirements

This section includes mandatory requirements and guidelines for configuring an EMR to integrate with the Client Summary Service.

5.1 Requirement Column Definition

For ease of review and understanding, requirements are documented in a manner consistent with previous EMR Certification documentation. For each requirement, the following information is provided:

- **ID** a unique identifier assigned to the requirement by Manitoba
- Requirement a concise statement describing the requirement
- Guidelines these additional instructions constitute part of the requirement and are relevant to implementation of the requirement in the EMR product. As such, these guidelines form part of the assessment criteria and are included in the planned product assessment.
- Additional Notes relevant information or examples intended to give additional context to the requirement and to improve understanding
- Status each requirement is clearly identified as:
 - New (not included in previous specifications);
 - o Updated (modification to intent of the requirement from a previous version); or
 - o Previous (unchanged from last issuance of core requirements).
- **Assessment** method of assessment is stated in the "Assessment" column for each requirement. All requirements will be assessed using the following method:
 - Assertion Vendors will make an assertion (Yes or No) based on their selfassessment of the product's ability to meet the requirement. Manitoba may choose to audit Vendor assertions as part of the certification process, as authorized within the Agreement
 - Verification leveraging the Certification Environment, Manitoba will verify the product's ability to meet requirements. Clinical and administrative resources may be involved in the verification process.
 - Demonstration Vendors will demonstrate key functions within their EMR product. Demonstrations may be conducted in person, by remote means (e.g. teleconference and Internet) or through recorded video.
 - System Integration Testing this most comprehensive assessment method requires an end-to-end test of key functions such as interoperability between the EMR product and other systems (e.g. eChart Manitoba Launch or eHealth_hub)



5.2 Client Summary Service Requirements

Table 3: Client Summary Service Requirements

ID	REQUIREMENT	GUIDELINES	ADDITIONAL NOTES	STATUS	ASSESSMENT
HCS001	Interfaces with the ClientSummary web service to facilitate EMR Client Summary capabilities.	Must support interfacing with the Client Summary Service at the Home Clinic level.		Previous	System Integration Testing
HCS002	Permits enabling and disabling Client Summary Service functionality, by Home Clinic.	 This applies to any EMR instances comprised of: A single Home Clinic Multiple Home Clinics A combination of Home Clinics and other clinics (non-Home Clinics) This functionality must be able to be restricted to EMR administrator/appropriate users. 	Enabling the Client Summary Service permits the Home Clinic to: Submit Client Summary Data Retrieve Client Summary Validation Messages	Previous	Demonstration
HCS003	Maintains Home Clinic details.	The EMR must maintain the Home Clinic Phone as defined in DGEN-03 – Home Clinic Phone. The ability to add, edit, or delete Home Clinic details must be able to be restricted to EMR administrator/appropriate users.		Previous	Demonstration
HCS004	Identifies client records which require a Client Summary Data Message.	A Client Summary Data Message is required when all of the following have been met:	It is acceptable for the EMR to monitor whether the same Client Summary Data set has	Previous	Verification



		The client has a Manitoba PHIN The client is enrolled to a Home Clinic enabled to use the Client Summary Service At a minimum, one (1) of the triggers described in 5.7 – Data Capture Requirements and Triggers has been created or updated The Client Summary Data Message must contain at least one (1) required entry from any of the 5.7.3 - Clinical Data Elements.	already been submitted to the Client Summary Service when determining whether to trigger a new submission.		
HCS005	Generates Client Summary Data Messages using the specified Client Summary Data elements.	As defined in 5.7 – Data Capture Requirements and Triggers. In the event that the EMR captures a Client Summary partial date in a non-structured format, the EMR must consider the Client Summary partial date as a blank value. With the exception noted above, all data included in the Client Summary Data Message must match the data presented to an EMR User.		Previous	Verification
HCS006	Groups, sorts, and filters Client Summary Data for each Client Summary Data Message.	The EMR must adhere to the Client Summary Data sorting, grouping, and filtering rules defined in Appendix B.		Previous	Demonstration



		Client Summary Data sorting, grouping and filtering rules must not result in modifications to the EMR source data.			
HCS007	Submits Client Summary Data Messages to the Client Summary Service using the <u>SubmitSummary</u> operation.	The EMR must: Conform to the XML schema definition (XSD) described in Web Service Documents Not require an EMR user to manually review, approve, or submit client summary data to the Client Summary Service		Previous	System Integration Testing
HCS008	Permits the submission of all required Client Summary Data Messages.	 A submission must include: All identified Client Summary Data Messages A single Client Summary Data Message per client The most recent Client Summary Data for a client at the time of submission The EMR administrator/appropriate user must be able to trigger the 		Previous	Demonstration
		above submission:At a configurable periodic time of dayOn demand			
HCS009	Provides the ability to send Client Summary Data for previously failed	If in the submission process a Client Summary Data Message has failed due to server or	E.g. Due to internet/connectivity issues, invalid certificate issues, etc.	Previous	System Integration Testing



	or halted submissions.	 authentication error, the EMR must: Halt further submission of Client Summary Data Permit the ability to submit the most recent Client Summary Data for all failed or halted clients once the error has been resolved 			
HCS010	Displays responses received from the <u>SubmitSummary</u> operation.	Responses must be accessible to the appropriate Home Clinic EMR Users, as designated by the Home Clinic.	Successful submission, having passed preliminary validation Error in preliminary validation (e.g. Home Clinic is unidentifiable, Home Clinic is not provisioned for the Client Summary Service) Error in submission, having failed due to server/system error	Previous	System Integration Testing
HCS011	Retrieves Client Summary Validation Messages from the Client Summary Service for an enabled Home Clinic within the EMR instance using the GetSummary Validation operation.	The EMR must: Conform to the XML schema definition (XSD) described in Web Service Documents Invoke the GetSummary Validation operation to retrieve Client Summary Validation Messages addressed to a Home Clinic	The <u>GetSummaryValidation</u> operation request will return up to 25 messages at a time. For each Home Clinic, the Transaction ID supplied in the initial request will be used in all subsequent <u>GetSummaryValidation</u> operation and <u>AcknowledgeSummary-</u>	Previous	System Integration Testing



		 Retrieve and save Client Summary Validation Messages in a single polling interval Retrieve Client Summary Validation Messages which have previously failed successful retrieval Verify the NumberOfMessages and MessagesRemaining attributes contained in the web response and request all remaining messages until no more remain GetSummaryValidati on Operation 1 The EMR User must not be prevented from working in the EMR while waiting for Client Summary Validation Message(s) to arrive. 	Validation operation requests made within the same polling period.		
HCS012	Sends an acknowledgement to the Client Summary Service of Client Summary Validation Messages received.	 Conform to the XML schema definition (XSD) described in Web Service Documents Invoke the AcknowledgeSummary-Validation operation to submit an acknowledgement to the Client Summary Service following receipt of a preceding 		Previous	System Integration Testing



		GetSummaryValidation operation response			
HCS013	Permits the retrieval of all Client Summary Validation Messages.	Retrieval must include a request for each enabled Home Clinics on the EMR instance. The EMR administrator/appropriate user must be able to request the above retrieval:	The Client Summary Service will route Client Summary Validation Messages to the eHealth_hub Home Clinic Mailbox for pick up by the EMR.	Previous	Demonstration
		At a configurable periodic time of dayOn demand			
HCS014	Provides an event logging mechanism for the Client Summary Data Message submission and Client Summary Validation Message retrieval process.	EMR interface log. Client Summary Data sage submission and nt Summary dation Message oval process. EMR interface log. The EMR interface log must be able to identify the date and time of attempt, error ID, error type, error message and a reference	Examples of events are successful communication and errors. It is acceptable to purge	Previous	System Integration Testing
			events logged after a period of 90 days.		
		to the submission or message retrieval which created the error.	Refer to 6.2.4 – SOAP Fault Response for SOAP message format and samples.		
HCS015	Displays all Client Summary Validation Messages from the GetSummary Validation operation in the appropriate Home Clinic	At minimum, the Home Clinic Remediation List must: Contain the fields returned from the GetSummary Validation	The Home Clinic Remediation List is where all users with access to the Home Clinic may view the list of Client Summary Validation Messages.	Previous	Demonstration
	Remediation List.	 operation response Categorize the messages retrieved from the GetSummary Validation operation as Client Summary 	A design consideration may include the ability to give the EMR User a way to navigate back to the Home Clinic Remediation List from within a		



		Validation Messages (differentiated from other messages such as enrolment remediation messages). Be sortable by Record Creation Date Be accessible to all EMR Users working on behalf of the Home Clinic Provide the EMR User with a way to access the client record directly from the Home Clinic Remediation List. It is not acceptable to require the EMR User to search for the client record in order to update Client Summary Data Allow an EMR User to clear a Client Summary Validation Message item (e.g. mark the item as complete, clear from queue, remove from list, etc.)	client record following Client Summary Validation Message remediation.		
HCS016	Processing of Client Summary functionality does not impact EMR performance.			Previous	Assertion
HCS017	Does not provide a mechanism for Client Summary functionality to be disabled at a Provider-level.		The disabling of Client Summary functionality in the EMR is done at the Home Clinic level.	Previous	Assertion



5.3 Information Sharing Requirements

EMRs must satisfy the following assertion-based information sharing requirements.

Table 4: Information Sharing Requirements

ID	REQUIREMENT	GUIDELINES	ADDITIONAL NOTES	STATUS	ASSESSMENT
INFS01	Provides Manitoba with notification in advance of planned changes to the EMR that relate to this specification.	Notification must include, at minimum, what has been changed in the EMR, and when the changes are planned.		Previous	Assertion
INFS02	Provides Manitoba with the ability to test planned changes to the EMR that relate to this specification.			Previous	Assertion
INFS03	Follow a documented process to track issues and problems during development and ongoing support of the EMR.			Previous	Assertion
INFS04	Follow a documented process to track changes to the EMR.		E.g. Process may include versioning information and how changes are logged.	Previous	Assertion

5.4 Home Clinic Enrolment Service Requirements

EMRs must be certified to the <u>eHealth_hub – Home Clinic Enrolment Service Interface Specification</u> and satisfy all requirements within, prior to certification towards the Client Summary Service. In the context of this specification, the following selected requirements will be re-assessed using the assessment methods noted below.



Table 5: Home Clinic Enrolment Service Requirements

REQUIREMENT CATEGORY	RELEVANT REQUIREMENT	ASSESSMENT METHOD
Home Clinic Management	ENR003	Verification
	ENR022	Demonstration
EMR System Details	ENR004	Demonstration
Enrolment Definition and Data Elements	ENR005	Verification
Home Clinic Remediation List	ENR017	Demonstration

5.5 Authentication Requirements

In addition to the specified requirements in this document the EMR must satisfy all requirements in the <u>eHealth_hub – Authentication</u> <u>Specification</u>.

5.6 Data Capture Requirement Column Definition

The following tables outline the data element requirements in a similar manner to the Client Summary requirements, with a few variations as described below:

- ID a unique identifier assigned to the requirement by Manitoba
- Data Element the label or name associated by Manitoba for this data element
- Description the meaning or intent of this data element, as defined by Manitoba
- Guidelines as defined above for requirements
- **Trigger** when denoted with "Yes", indicates whether the data element must trigger the generation of a Client Summary message when the data element value has been added, changed, or deleted
- Status as defined above for requirements
- Assessment as defined above for requirements



5.7 Data Capture Requirements and Triggers

The following tables contain the Client Summary Data elements required of the EMR to support the data capture, validation, and submission of Client Summary Data.

5.7.1 Client Demographic Data Elements

Table 6: Data Elements: Client Demographics

ID	DATA ELEMENT	DESCRIPTION	GUIDELINES	TRIGGER	STATUS	ASSESSMENT
CDEM-01	Client Identifier	Use the Baseline specification data element DE01-12 – Patient Identifier.	For the Client Summary Service, this must be a Manitoba Provincial Health Information Number (PHIN).	New or updated data	Previous	System Integration Testing
			PHIN must not contain spaces and must be accompanied by <u>CDEM-02</u> , Client Identifier Type.			
CDEM-02	Client Identifier Type	Use the Baseline specification data element DE01-13 – Patient Identifier Type.	For the Client Summary Service, this must represent a Manitoba PHIN type, i.e. "JHNMB". Must be accompanied by CDEM-01, Client Identifier.	New or updated data	Previous	Verification
CDEM-03	Manitoba Health Registration Number	Use the Baseline specification data element DE01-14 – Manitoba Health Registration Number.		New or updated data	Previous	Verification
CDEM-04	First Name	Use the Baseline specification data element DE01-03 – First Name.		New or updated data	Previous	Verification



ID	DATA ELEMENT	DESCRIPTION	GUIDELINES	TRIGGER	STATUS	ASSESSMENT
CDEM-05	Middle Name	Use the Baseline specification data element DE01-04 – Middle Name.		New or updated data	Previous	Verification
CDEM-06	Last Name	Use the Baseline specification data element DE01-02 – Last Name.		New or updated data	Previous	Verification
CDEM-07	Date of Birth	Use the Baseline specification data element DE01-08 – Date of Birth.		New or updated data	Previous	Verification
CDEM-08	Administrative Sex	Use the Baseline specification data element DE01-07 – Administrative Sex.		New or updated data	Previous	Verification
CDEM-09	Street Address	Use the Baseline specification data element DE01-18 – Street Address.		New or updated data	Previous	Verification
CDEM-10	City	Use the Baseline specification data element DE01-19 – City.		New or updated data	Previous	Verification
CDEM-11	Province	Use the Baseline specification data element DE01-20 – Province/State.		New or updated data	Previous	Verification
CDEM-12	Postal Code	Use the Baseline specification data element DE01-22 – Postal/Zip Code.		New or updated data	Previous	Verification
CDEM-13	Phone Code	Use the Baseline specification data element DE01-23 – Telephone	Must be provided in the format:	New or updated data	Previous	Verification



ID	DATA ELEMENT	DESCRIPTION	GUIDELINES	TRIGGER	STATUS	ASSESSMENT
		Number.	###-###-###			
CDEM-14	Client EMR ID	Use the Baseline specification data element DE01-11 – EMR Patient Identifier.		No	Previous	Verification

5.7.2 General Data Elements

Table 7: Data Elements: General

ID	DATA ELEMENT	DESCRIPTION	GUIDELINES	TRIGGER	STATUS	ASSESSMENT
DGEN-01	Home Clinic Identifier	The unique identifier assigned to the Home Clinic by Shared Health. Use the Home Clinic Enrolment Service data element ENDC-01 – Home Clinic Identifier.	Contains numeric characters only.	No	Previous	Verification
DGEN-02	Home Clinic Name	The name used to represent the Home Clinic on the Client Summary Document. Use the Home Clinic Enrolment Service data element ENDC-02 – Home Clinic Name.	Maximum of 70 characters. Name is not required to be consistent with legal name or other names used by the clinic (e.g. common name).	No	Previous	Verification
DGEN-03	Home Clinic Phone	The primary phone number of the Home Clinic.	Must be able to support a phone number extension. Must be provided in either of the following formats:	No	Previous	Verification



ID	DATA ELEMENT	DESCRIPTION	GUIDELINES ###-###-#### ###-###-### Ext #	TRIGGER	STATUS	ASSESSMENT
DGEN-04	Main Primary Care Provider	Identifies the <i>name</i> of the main Primary Care Provider associated with the client's enrolment. Use the provider name associated with the Home Clinic Enrolment Service data element ENDC-07 – Provider Billing Number.	Must be provided in the format: [First Name] [Middle Initial (if available)] [Last Name]	New or updated data	Previous	Verification
DGEN-05	Last Updated Date	The date of the generation of the client summary message.	Must be generated by the EMR as a full date. Date formats are specified in the WSDL.	No	Previous	Verification

Table 8: Data Elements: Home Clinic Client Summary Comments

ID	DATA ELEMENT	DESCRIPTION	GUIDELINES	TRIGGER	STATUS	ASSESSMENT
CSD1-01	Home Clinic Client Summary Comments	A data element associated with a client's medical record.	Maximum of 500 characters. Must be labelled as "Home Clinic Client Summary Comments" in the EMR. Must provide the following indication to the EMR user in a manner consistent with the EMR's	New or updated data	Previous	Verification



ID	DATA ELEMENT	DESCRIPTION	GUIDELINES	TRIGGER	STATUS	ASSESSMENT
			product design:			
			"Information should only be entered in this field if considered essential to the ongoing care needs of the client and will be shared on the Client Summary in eChart Manitoba."			

5.7.3 Clinical Data Elements

Table 9: Data Elements: Health Conditions and Diagnoses

ID	DATA ELEMENT	DESCRIPTION	GUIDELINES	TRIGGER	STATUS	ASSESSMENT
CSD2-01	Condition Onset Date	Use the Baseline specification data element DE06-01 – Date of Onset.	Date formats are specified in the WSDL.	New or updated data	Previous	Verification
CSD2-02	Condition Status	Use the Baseline specification data element DE06-06 – Status.		New or updated data	Previous	Verification
CSD2-03	Condition Description	Use the Baseline specification data element DE06-05 – Description.	A value for this data element is required in order for all data elements in Table 9 to be included in the Client Summary Data Message. Value must not be blank or null.	New or updated data	Previous	Verification



Table 10: Data Elements: Surgeries, Procedures and Interventions

ID	DATA ELEMENT	DESCRIPTION	GUIDELINES	TRIGGER	STATUS	ASSESSMENT
CSD3-01	Intervention Date	Use the Baseline specification data element DE06-07 – Intervention Date.	Date formats are specified in the WSDL.	New or updated data	Previous	Verification
CSD3-02	Intervention Description	Use the Baseline specification data element DE06-08 – Intervention.	A value for this data element is required in order for all data elements in Table 10 to be included in the Client Summary Data Message. Value must not be blank or null.	New or updated data	Previous	Verification

Table 11: Data Elements: Suspected Allergies and Intolerances

ID	DATA ELEMENT	DESCRIPTION	GUIDELINES	TRIGGER	STATUS	ASSESSMENT
CSD4-01	Allergen	Use the Baseline specification data element DE06-11 – Offending Agent.	A value for this data element is required in order for all data elements in Table 11 to be included in the Client Summary Data Message. Value must not be blank or null.	New or updated data	Previous	Verification
CSD4-02	Allergy Drug Code	Use the Baseline specification data element DE06-12 – Offending Agent Drug Code.		New or updated data	Previous	Verification
CSD4-03	Allergy Severity	Use the Baseline specification data element DE06-15 – Severity.		New or updated data	Previous	Verification



ID	DATA ELEMENT	DESCRIPTION	GUIDELINES	TRIGGER	STATUS	ASSESSMENT
CSD4-04	Allergy Reaction Type	Use the Baseline specification data element DE06-14 – Reaction Type.		New or updated data	Previous	Verification
CSD4-05	Allergy Reaction Description	Use the Baseline specification data element DE06-16 – Reaction Description.		New or updated data	Previous	Verification

Table 12: Data Elements: Prescribed Medications

ID	DATA ELEMENT	DESCRIPTION	GUIDELINES	TRIGGER	STATUS	ASSESSMENT
CSD5-01	Prescription Written Date	Use the Baseline specification data element DE09-01 – Prescription Written Date.	Date formats are specified in the WSDL.	New or updated data	Previous	Verification
CSD5-02	Medication Name	Use the Baseline specification data element DE09-03 – Medication Name.	A value for this data element is required in order for all data elements in Table 12 to be included in the Client Summary Data Message. Value must not be blank or null.	New or updated data	Previous	Verification
CSD5-03	Medication Strength	Use the Baseline specification data element DE09-05 – Medication Strength.		New or updated data	Previous	Verification
CSD5-04	Medication Dosage	Use the Baseline specification data element DE09-06 – Medication Dosage.		New or updated data	Previous	Verification



ID	DATA ELEMENT	DESCRIPTION	GUIDELINES	TRIGGER	STATUS	ASSESSMENT
CSD5-05	Medication Route	Use the Baseline specification data element DE09-08 – Medication Route.		New or updated data	Previous	Verification
CSD5-06	Medication Frequency	Use the Baseline specification data element DE09-09 – Medication Frequency.		New or updated data	Previous	Verification
CSD5-07	Medication Duration	Use the Baseline specification data element DE09-10 – Medication Duration.		New or updated data	Previous	Verification

Table 13: Data Elements: Vital Signs Recorded

ID	DATA ELEMENT	DESCRIPTION	GUIDELINES	TRIGGER	STATUS	ASSESSMENT
CSD6-01	Vital Signs Date	The date of the recorded vital signs reading(s). Provides the last six (6) dates of recorded vital sign readings (for the Vital Signs described in CSD6-02 to CSD6-07). In cases where multiple vital signs were recorded together, only the latest vital reading is required.	Must be accompanied by the Vital Signs readings as defined in data elements CSD6-02 to CSD6-07. A value for this data element is required in order for all data elements in Table 13 to be included in the Client Summary Data Message. Value must not be blank or null. Date formats are specified in the WSDL.	New or updated data	Previous	Verification



ID	DATA ELEMENT	DESCRIPTION	GUIDELINES	TRIGGER	STATUS	ASSESSMENT
CSD6-02	Vital Signs Blood Pressure	Use the Baseline specification data elements, DE06-29 – Systolic Blood Pressure, and DE06-30 – Diastolic Blood Pressure.	Must be provided as a single reading, in the format: [Systolic Blood Pressure] / [Diastolic Blood Pressure].	New or updated data	Previous	Verification
CSD6-03	Vital Signs Heart Rate	Use the Baseline specification data element, DE06-32 – Heart Rate.		New or updated data	Previous	Verification
CSD6-04	Vital Signs Height	Use the Baseline specification data element, DE06-32 – Height.	Must be accompanied by CSD6-04M, Vital Signs Height Unit of Measure.	New or updated data	Previous	Verification
CSD6-04M	Vital Signs Height Unit of Measure	The unit of measure for data element CD7-04 – Vital Signs Height. Use the Baseline specification data element, DE06-32 – Height.		New or updated data	Previous	Verification
CSD6-05	Vital Signs Weight	Use the Baseline specification data element, DE06-33 – Weight.	Must be accompanied by CSD6-05M, Vital Signs Weight Unit of Measure.	New or updated data	Previous	Verification
CSD6-05M	Vital Signs Weight Unit of Measure	The unit of measure for data element CD7-05 – Vital Signs Weight. Use the Baseline specification data element, DE06-33 – Weight.		New or updated data	Previous	Verification
CSD6-06	Vital Signs Waist	Use the Baseline specification data element, DE06-35 – Waist Circumference.	Must be accompanied by CSD6-06M, Vital Signs Waist Circumference Unit of Measure.	New or updated data	Previous	Verification



ID	DATA ELEMENT	DESCRIPTION	GUIDELINES	TRIGGER	STATUS	ASSESSMENT
CSD6-06M	Vital Signs Waist Unit of Measure	The unit of measure for data element CD7-06 – Vital Signs Waist Circumference. Use the Baseline specification data element, DE06-35 – Waist Circumference.		New or updated data	Previous	Verification
CSD6-07	Vital Signs BMI	Use the Baseline specification data element, DE06-34 – Body Mass Index (BMI).		New or updated data	Previous	Verification

5.7.4 Additional System Data Elements

Additional system and user/operator attributes for data submission to the Client Summary Service (such as EMR application details) are defined in the Additional System Data Elements table below.

Table 14: Additional System Data Elements

ID	DATA ELEMENT	DESCRIPTION	GUIDELINES	STATUS	ASSESSMENT
DSYS-01	EMR Identifier	The unique EMR identifier assigned to the EMR instance by Shared Health.	Display of this data element to the EMR User is not required.	Previous	Assertion
DSYS-02	EMR Application Name	The EMR product name.	Display of this data element to the EMR User is not required.	Previous	Assertion
DSYS-03	EMR Version Info	The EMR product version information.	Display of this data element to the EMR User is not required.	Previous	Assertion
DSYS-04	Operator ID	Contains the user identifier of the EMR User performing the <u>SubmitSummary operation</u> .	Display of this data element to the EMR User is not required.	Previous	Assertion
DSYS-05	Message	A unique identifier used for each	_GetSummaryValidation_Oper	Previous	Assertion



ID	Control ID	<u>SubmitSummary operation</u> request and returned in any applicable <u>GetSummaryValidation</u> operation responses.	ation 1 SubmitSummary Operation GetSummaryValidation Operation 1 Display of this data element to the EMR User is not required.	STATUS	ASSESSMENT
DSYS-06	Transaction ID	A unique identifier for retrieving a set of Client Summary Validation Messages to ensure transactional uniqueness. For each Home Clinic, the Transaction ID supplied in the initial GetSummary Validation operation request must be used in all subsequent GetSummary Validation operation and AcknowledgeSummary Validation operation requests needed to obtain the remaining messages.	Display of this data element to the EMR User is not required.	Previous	Assertion



6 Appendix A: Web Service

6.1 Web Service Definition Language (WSDL)

The Client Summary Service has been exposed to the EMR community as a web service. The web service interaction is defined within an individual WSDL. The WSDL will be exposed on an HTTPS listener where authentication will occur based on prior certificate exchange. Once the EMR passes authentication, the EMR ID contained within the message body is checked to validate authorization to use the service. If the EMR fails authentication or authorization, a response containing fault code 5403 will be returned.

Note: Only the WSDL materials provided via the Certification process are supported. It is not recommended to automatically download the WSDL from the Client Summary Service directly.

6.1.1 Web Service Documents

The web service documents may be found in the assessment addendum.

6.2 Request / Response Definitions

6.2.1 SubmitSummary Operation

This operation permits the submission of the EMR generated Client Summary messages to the Client Summary Service. Applicable use cases are:

- Submit Client Summary Data Message(s) (<u>UC-004</u>)
- Submit Failed or Halted Client Summary Data Message(s) (<u>UC-005</u>)

REQUEST AND RESPONSE PARAMETERS

Table 15: SubmitSummary Operation Request Parameters

PARAMETER	USAGE	REPETITION	DESCRIPTION
EMRID	Mandatory	1	Refer to EMR Identifier (<u>DSYS-01</u>).



EMRApplicationName	Mandatory	1	Refer to EMR Application Name (DSYS-02)
EMRApplicationVersion	Mandatory	1	Refer to EMR Version Info (DSYS-03).
EMROperatorID	Mandatory	1	Refer to Operator ID (<u>DSYS-04</u>).
MessageControlID	Mandatory	1	Refer to Message Control ID (DSYS-05)
Summary	Mandatory	1	
HomeClinicIdentifier	Mandatory	1	Refer to Home Clinic Identifier (<u>DGEN-01</u>).
Client	Mandatory	1	
ClientIdentifierID	Mandatory	1	Refer to Client Identifier (CDEM-01)
ClientIdentifier	Mandatory	1	Refer to Client Identifier Type (CDEM-02)
Type			
ManitobaHealth-	Optional	1	Refer to Manitoba Health Registration Number (CDEM-03)
RegistrationNumber			
FirstName	Mandatory	1	Refer to First Name (CDEM-04)
MiddleName	Optional	1	Refer to Middle Name (CDEM-05)
LastName	Mandatory	1	Refer to Last Name (CDEM-06)
DOB	Mandatory	1	Refer to Date of Birth (<u>CDEM-07</u>)
AdministrativeSex	Mandatory	1	Refer to Administrative Sex (CDEM-08)
StreetAddress	Optional	1	Refer to Street Address (<u>CDEM-09</u>)
City	Optional	1	Refer to City (CDEM-10)
Province	Optional	1	Refer to Province (<u>CDEM-11</u>)
PostalCode	Optional	1	Refer to Postal Code (<u>CDEM-12</u>)
PhoneCode	Optional	1	Refer to Phone Code (<u>CDEM-13</u>)
ClientEMRID	Mandatory	1	Refer to Client EMR ID (CDEM-14)
LastUpdated	Mandatory	1	Refer to Last Updated Date (<u>DGEN-05</u>)
HomeClinicName	Mandatory	1	Refer to Home Clinic Name (<u>DGEN-02</u>).
HomeClinicPhone	Mandatory	1	Refer to Home Clinic Phone (<u>DGEN-03</u>).
MainPrimaryCareProvider	Optional	1	Refer to Main Primary Care Provider (<u>DGEN-04</u>).
HomeClinicClientSummary	Optional	1	Refer to Home Clinic Client Summary Comments (CSD1-01).
Comments			
ActiveHealthCondDiag	Optional	Unbounded	
OnsetDate	Optional	1	Refer to Condition Onset Date (CSD2-01).
Status	Optional	1	Refer to Condition Status (<u>CSD2-02</u>).
Description	Mandatory	1	Refer to Condition Description (CSD2-03).
HealthCondDiag	Optional	Unbounded	
OnsetDate	Optional	1	Refer to Condition Onset Date (CSD2-01).



Status	Optional	1	Refer to Condition Status (CSD2-02).
Description	Mandatory	1	Refer to Condition Description (CSD2-03).
Intervention	Optional	Unbounded	
InterventionDate	Optional	1	Refer to Intervention Date (CSD3-01).
Description	Mandatory	1	Refer to Intervention Description (CSD3-02).
AllergyIntolerance	Optional	Unbounded	
Allergen	Mandatory	1	Refer to Allergen (CSD4-01).
DrugCode	Optional	1	Refer to Allergy Drug Code (CSD4-02).
Severity	Optional	1	Refer to Allergy Severity (CSD4-03).
ReactionType	Optional	1	Refer to Allergy Reaction Type (CSD4-04).
ReactionDescription	Optional	1	Refer to Allergy Reaction Description (CSD4-05).
Prescription	Optional	Unbounded	
WrittenDate	Optional	1	Refer to Prescription Written Date (<u>CSD5-01</u>).
Name	Mandatory	1	Refer to Medication Name (<u>CSD5-02</u>).
Strength	Optional	1	Refer to Medication Strength (CSD5-03).
Dosage	Optional	1	Refer to Medication Dosage (CSD5-04).
Route	Optional	1	Refer to Medication Route (CSD5-05).
Frequency	Optional	1	Refer to Medication Frequency (CSD5-06).
Duration	Optional	1	Refer to Medication Duration (CSD5-07).
Vitals	Optional	6	
VitalsDate	Mandatory	1	Refer to Vital Signs Date (CSD6-01).
BP	Optional	1	Refer to Vital Signs Blood Pressure (CSD6-02).
HeartRate	Optional	1	Refer to Vital Signs Heart Rate (CSD6-03).
BMI	Optional	1	Refer to Vital Signs BMI (<u>CSD6-07</u>).
Height	Optional	1	
ResultValue	Optional	1	Refer to Vital Signs Height (CSD6-04).
UnitOfMeasure	Optional	1	Refer to Vital Signs Height Unit of Measure (CSD6-04M).
Weight	Optional	1	
ResultValue	Optional	1	Refer to Vital Signs Weight (CSD6-05).
UnitOfMeasure	Optional	1	Refer to Vital Signs Weight Unit of Measure (CSD6-05M).
Waist	Optional	1	
ResultValue	Optional	1	Refer to Vital Signs Waist (CSD6-06).
UnitOfMeasure	Optional	1	Refer to Vital Signs Waist Unit of Measure (CSD6-06M)



Table 16: SubmitSummary Operation Response Parameters

PARAMETER	USAGE	REPETITION	DESCRIPTION
CreationDate	Mandatory	1	The date stamp of the client summary submission to the Client Summary Service.
Code	Optional	1	An alphanumeric value representing the business validation response returned for the enrolment submission. This value will be blank if originating request successfully passes validation.
Description	Optional	1	A narrative description of the Code.
MessageControlID	Mandatory	1	A unique receipt for the EMR's client summary submission, provided by the Client Summary Service.



SOAP REQUEST SAMPLE

```
<?xml version="1.0" encoding="utf-8"?>
<SubmitSummaryRequest>
 <EMRID>EMRA001</EMRID>
 <EMRApplicationName>EMR Product Name</EMRApplicationName>
 <EMRApplicationVersion>1.0</EMRApplicationVersion>
 <EMROperatorID>EMRUsername/EMROperatorID>
 <MessageControlID>000001
 <Summary>
   <HomeClinicIdentifier>[HOMECLINIC-01]/HomeClinicIdentifier>
   <Client>
      <ClientIdentifier>
       <ClientIdentifierID>00000000</ClientIdentifierID>
       <ClientIdentifierType>JHNMB</ClientIdentifierType>
      </ClientIdentifier>
      <ManitobaHealthRegistrationNumber>000000/ManitobaHealthRegistrationNumber>
      <FirstName>First Name</FirstName>
      <MiddleName>Middle Name</MiddleName>
      <LastName>Last Name
      <DOB>1975-12-13</DOB>
      <AdministrativeSex>M</AdministrativeSex>
      <StreetAddress>355 Portage Ave.</StreetAddress>
     <City>Winnipeg</City>
      <Province>MB</Province>
     <PostalCode>R3B0J6</PostalCode>
     <PhoneCode>204-555-6162</PhoneCode>
      <ClientEMRID>CL0005</ClientEMRID>
    </Client>
   <LastUpdated>2019-07-15T12:12:12
   <HomeClinicName>>[HOMECLINIC-01 NAME]
   <HomeClinicPhone>204-555-5555 Ext 123/HomeClinicPhone>
    <MainPrimaryCareProvider>Roger Middle Test</MainPrimaryCareProvider>
    <HomeClinicComments>This is the HC Test Comments/HomeClinicComments>
      <ActiveHealthCondDiag>
             <Description>DIABETES MELLITUS WITHOUT MENTION OF
COMPLICATION</Description>
             <OnsetDate>2004-07-15</OnsetDate>
             <Status>Active</Status>
      </ActiveHealthCondDiag>
      <ActiveHealthCondDiag>
             <Description>EXTRINSIC ASTHMA/Description>
             <OnsetDate>2012-07-15</OnsetDate>
             <Status>Active</Status>
      </ActiveHealthCondDiag>
      <ActiveHealthCondDiag>
             <Description>SPECIFIED AS MALIGNANT /Description>
             <Status>Active</Status>
      </ActiveHealthCondDiag>
      <HealthCondDiag>
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      </HealthCondDiag>
      <HealthCondDiag>
             <Description>DISTURBANCES OF AMINO-ACID TRANSPORT/Description>
             <OnsetDate>2012-07-15</OnsetDate>
             <Status>Resolved</Status>
```



```
</HealthCondDiag>
  <HealthCondDiag>
        <Description>WITH CONJUNCTIVAL XEROSIS 
         <OnsetDate>2013-07-15</OnsetDate>
         <Status>Resolved</Status>
  </HealthCondDiag>
  <HealthCondDiag>
         <Description>MALNUTRITION OF MODERATE DEGREE 
         <OnsetDate>2012-07-15</OnsetDate>
         <Status>Resolved</Status>
  </HealthCondDiag>
  <HealthCondDiag>
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        <OnsetDate>2008-07-15</OnsetDate>
         <Status>Resolved</Status>
  </HealthCondDiag>
  <HealthCondDiag>
         <Description>HYPOGLYCAEMIC COMA/Description>
         <Status>Resolved</Status>
  </HealthCondDiag>
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  <InterventionDate>2019-05-06</InterventionDate>
</Tntervention>
<Intervention>
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</Intervention>
<Intervention>
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</Intervention>
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</Intervention>
<Intervention>
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</Intervention>
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  <ReactionDescription>Anaphylactic Shock</ReactionDescription>
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</AllergyIntolerance>
<AllergyIntolerance>
  <Allergen>Shellfish</Allergen>
```



```
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  <ReactionDescription>Throat Swelling</ReactionDescription>
</AllergyIntolerance>
<AllergyIntolerance>
 <Allergen>Bees</Allergen>
  <Severity>Severe</Severity>
 <ReactionType>Allergy</ReactionType>
  <ReactionDescription>Death</reactionDescription>
</AllergyIntolerance>
<AllergyIntolerance>
  <allergen>Peanuts</allergen>
 <Severity>Mild</Severity>
 <ReactionType>Intolerance/ReactionType>
  <ReactionDescription>Itchy Throat</ReactionDescription>
</AllergyIntolerance>
  <Prescription>
         <Name>Lipitor</Name>
         <WrittenDate>2018-01-16
         <Strength>10 MG</Strength>
         <Dosage>20 Tablets</Dosage>
         <Route>Oral</Route>
         <Frequency>1 pill BID</prequency>
         <Duration>10 days</Duration>
  </Prescription>
  <Prescription>
         <Name>APO GLYBURIDE</Name>
         <WrittenDate>2019-05-16
         <Strength>2.5 MG</Strength>
         <Dosage>30 Tablets</Dosage>
         <Route>Oral</Route>
         <Frequency>1 pill Once a day</prequency>
         <Duration>30 Days</Duration>
  </Prescription>
  <Prescription>
         <Name>TYLENOL W/CODEINE NO. 3 TAB
         <WrittenDate>2019-06-01</WrittenDate>
         <Strength>30 MG</Strength>
         <Dosage>60 Tablets</Dosage>
         <Route>Oral</Route>
         <Frequency>1 pill QID</frequency>
         <Duration>15 Days</Duration>
  </Prescription>
  <Prescription>
         <Name>Sublinox</Name>
         <WrittenDate>2018-10-24
         <Strength>10 MG</Strength>
         <Dosage>90 Tablets</Dosage>
         <Route>Oral</Route>
         <Frequency>1 pill Once a day</prequency>
         <Duration>90 Days</Duration>
  </Prescription>
  <Prescription>
         <Name>METFORMIN FC</Name>
         <WrittenDate>2019-03-16
         <Strength>500 MG</Strength>
         <Dosage>60 Tablets</Dosage>
         <Route>Oral</Route>
         <Frequency>1 pill BID</prequency>
```



```
<Duration>30 Days</Duration>
  </Prescription>
  <Prescription>
         <Name>METFORMIN FC</Name>
         <WrittenDate>2018-11-16</WrittenDate>
         <Strength>850 MG</Strength>
         <Dosage>60 Tablets</Dosage>
         <Route>Oral</Route>
         <Frequency>1 pill BID</prequency>
         <Duration>30 Days</Duration>
  </Prescription>
<Vitals>
  <VitalsDate>2019-07-15</VitalsDate>
 <BP>130 / 70</BP>
  <HeartRate>70 BPM</HeartRate>
 <BMI>22.2</BMI>
 <Height>
   <ResultValue>70</ResultValue>
    <UnitOfMeasure>in</UnitOfMeasure>
 </Height>
 <Weight>
   <ResultValue>155
   <UnitOfMeasure>lb</UnitOfMeasure>
 </Weight>
  <Waist>
   <ResultValue>31</ResultValue>
   <UnitOfMeasure>in</UnitOfMeasure>
 </Waist>
</Vitals>
<Vitals>
 <VitalsDate>2019-07-11</VitalsDate>
 <BP>150 / 90</BP>
</Vitals>
<Vitals>
  <VitalsDate>2019-06-11</VitalsDate>
 <BP>155 / 95</BP>
 <BMI>25.8</BMI>
 <Height>
   <ResultValue>70</ResultValue>
   <UnitOfMeasure>in</UnitOfMeasure>
 </Height>
 <Weight>
   <ResultValue>180</ResultValue>
    <UnitOfMeasure>lb</UnitOfMeasure>
 </Weight>
</Vitals>
<Vitals>
  <VitalsDate>2019-05-12</VitalsDate>
  <HeartRate>100 BPM/HeartRate>
</Vitals>
<Vitals>
 <VitalsDate>2019-05-02</VitalsDate>
   <ResultValue>35</ResultValue>
   <UnitOfMeasure>in/UnitOfMeasure>
 </Waist>
</Vitals>
<Vitals>
 <VitalsDate>2018-07-01</VitalsDate>
```



```
<BP>110 / 50</BP>
      <HeartRate>95 BPM</HeartRate>
      <BMI>24.4</BMI>
      <Height>
       <ResultValue>70</ResultValue>
       <UnitOfMeasure>in</UnitOfMeasure>
      </Height>
      <Weight>
       <ResultValue>170</ResultValue>
       <UnitOfMeasure>lb</UnitOfMeasure>
      </Weight>
       <ResultValue>33</ResultValue>
       <UnitOfMeasure>in</UnitOfMeasure>
      </Waist>
    </Vitals>
 </Summary>
</SubmitSummaryRequest>
```

SOAP RESPONSE SAMPLE

```
<?xml version="1.0" encoding="utf-8"?>
<SubmitSummaryResponse
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="urn:ClientSummaryService">
  <CreationDate>2012-12-13T12:12:12</CreationDate>
  <Code>str1234</Code>
  <Description>str1234</Description>
  <MessageControlID>000001</MessageControlID>
</SubmitSummaryResponse>
```



6.2.2 GetSummaryValidation Operation

This operation permits the retrieval of Client Summary Validation Messages from the Client Summary Service. Applicable use cases are:

• Retrieve Client Summary Validation Message(s) (UC-006)

REQUEST AND RESPONSE PARAMETERS

Table 17: GetSummaryValidation Operation Request Parameters

PARAMETER	USAGE	REPETITION	DESCRIPTION
EMRID	Mandatory	1	Refer to EMR Identifier (<u>DSYS-01</u>).
EMRApplicationName	Mandatory	1	Refer to EMR Name (DSYS-02).
EMRApplicationVersion	Mandatory	1	Refer to EMR Version Info (DSYS-03).
TransactionID	Mandatory	1	Refer to Transaction ID (DSYS-06).
HomeClinicIdentifier	Mandatory	1	Refer to Home Clinic Identifier (<u>DGEN-01</u>).

Table 18: GetSummaryValidation Operation Response Parameters

PARAMETER	USAGE	REPETITION	DESCRIPTION
SuccessStatus	Mandatory	1	A Boolean indicating success (true) or failure (false).
NumberOfMessages	Mandatory	Unbounded	Number of messages contained in the response.
MessagesRemaining	Mandatory	Unbounded	Number of messages remaining in current mailbox/queue.
Message	Optional	25	The collection of UTF-8 encoded messages that will be returned when NumberOfMessages is greater than zero. The messages returned will follow the sequence that the messages were placed on the discrete EMR queue (FIFO). The EMR must process the messages in the order received. The number of messages provided will be equal to the number of messages provided within the NumberOfMessages attribute. Messages contain the following attributes, where available: CreationDate The system generated date of the record creation.



HomeClinicIdentifier	Refer to Home Clinic Identifier (<u>DGEN-01</u>).
MessageControlID	Refer to Message Control ID (DSYS-05).
Туре	A validation type code of "Summary".
Description	A description of the validation, including any actions needed to remediate the record.
ClientIdentifierID	A unique client identifier, accompanied by the ClientIdentifierType.
ClientIdentifierType	The type of identifier associated with the unique ClientIdentifierID.
ManitobaHealth- RegistrationNumber	The health identifier associated to Manitoba individuals or families.
FirstName	The client's first name.
MiddleName	The client's middle name.
LastName	The client's last name.
DOB	The client's date of birth.
AdministrativeSex	The client's administrative sex.
StreetAddress	The client's street address.
City	The client's city of residence.
Province	The client's province of residence.
PostalCode	The client's postal code address.
PhoneCode	The client's phone number.
ClientEMRID	The client's EMR identifier.

SOAP REQUEST SAMPLE

<?xml version="1.0" encoding="utf-8"?>
<GetSummaryValidationRequest
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:ClientSummaryService">
 <EMRID>1234</EMRID>



<EMRApplicationName>str1234</EMRApplicationName>
<EMRApplicationVersion>str1234</EMRApplicationVersion>
<TransactionID>str1234</TransactionID>
<HomeClinicIdentifier>1234</HomeClinicIdentifier>
</GetSummaryValidationRequest>

SOAP RESPONSE SAMPLE

```
<?xml version="1.0" encoding="utf-8"?>
<GetSummaryValidationResponse>
 <SuccessStatus>true</SuccessStatus>
  <NumberOfMessages>1</NumberOfMessages>
  <MessagesRemaining>0</MessagesRemaining>
 <Messages>
   <Message>
      <CreationDate>20192-07-26T12:12:12
     <HomeClinicIdentifier>str1234/HomeClinicIdentifier>
      <MessageControlID>str1234</messageControlID>
     <Client>
       <ClientIdentifier>
         <ClientIdentifierID>########</ClientIdentifierID>
         <ClientIdentifierType>JHNMB</ClientIdentifierType>
       </ClientIdentifier>
        <ManitobaHealthRegistrationNumber>######</ManitobaHealthRegistrationNumber>
       <FirstName>str1234</FirstName>
        <MiddleName>str1234</MiddleName>
       <LastName>str1234
       <DOB>1990-12-13
       <AdministrativeSex>M</AdministrativeSex>
       <StreetAddress>str1234/StreetAddress>
       <City>str1234</City>
       <Province>MB</Province>
       <PostalCode>str1234</PostalCode>
       <PhoneCode>204-555-5555</PhoneCode>
       <ClientEMRID>str1234</ClientEMRID>
      </Client>
      <Type>Summary</Type>
      <Description>str1234/Description>
   </Message>
  </Messages>
</GetSummaryValidationResponse>
```



6.2.3 AcknowledgeSummaryValidation Operation

This operation acknowledges receipt of the successful retrieval of Client Summary Validation Messages from the Client Summary Service. Applicable use cases are:

• Retrieve Client Summary Validation Message(s) (UC-006)

REQUEST AND RESPONSE PARAMETERS

Table 19: AcknowledgeSummaryValidation Operation Request Parameters

PARAMETER	USAGE	REPETITION	DESCRIPTION
EMRID	Mandatory	1	Refer to EMR Identifier (<u>DSYS-01</u>).
HomeClinicIdentifier	Mandatory	1	Refer to EMR Name (DSYS-02).
TransactionID	Mandatory	1	Refer to Transaction ID (DSYS-06).

Table 20: GetSummaryValidation Operation Response Parameters

PARAMETER	USAGE	REPETITION	DESCRIPTION
SuccessStatus	Mandatory	1	A Boolean indicating success (true) or failure (false).

SOAP REQUEST SAMPLE

```
<?xml version="1.0" encoding="utf-8"?>
<AcknowledgeSummaryValidationRequest
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="urn:ClientSummaryService">
  <EMRID>1234</EMRID>
  <HomeClinicIdentifier>1234</HomeClinicIdentifier>
  <TransactionID>str1234</TransactionID>
</AcknowledgeSummaryValidationRequest>
```

SOAP RESPONSE SAMPLE

```
<?xml version="1.0" encoding="utf-8"?>
<AcknowledgeSummaryValidationResponse
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="urn:ClientSummaryService">
  <SuccessStatus>true</SuccessStatus>
</AcknowledgeSummaryValidationResponse>
```



6.2.4 SOAP Fault Response

The SOAP fault response is produced in the case of an error scenario as opposed to inclusion within the business context response.

Table 21: SOAP Fault Response Structure

PARAMETER	DESCRIPTION					
FaultCode	The category code for error classification.	The category code for a given error. Possible categories are CLIENT and SERVER to designate different				
FaultString	An explanation of the f	An explanation of the fault.				
Detail	Description of the given error contains:					
	ErrorID	The identifier corresponding to a specific error.				
	ErrorMessage	Description of the given error.				

ERROR SCENARIOS

There are two types of error scenarios pertaining to the Client Summary Service transaction:

- 1 Server There was a problem with the server such that the message could not be processed.
- 2 Client The message was incorrectly formed or contained incorrect information or the EMR configuration was incorrect. The errors may be further subcategorized as:
 - 1. Business Errors Characterized as errors in message submission or retrieval with the Client Summary Service. These can be trapped by the application and translated to application-specific language to provide context to the requestor as to the nature of the error.
 - 2. System Errors Characterized as communication or transport-level errors. These may also include errors which address malformed messaging errors.



Note that the error messages are not encrypted.

ERROR CODES

The following list is a sample of the most common error scenarios that may occur.

Table 22: SOAP Fault Response Structure

ERROR ID	ERROR TYPE (FAULTCODE)	ERROR CATEGORY (FAULTSTRING)			
5000	CLIENT	Submit Summary error			
	CLIENT	Get Summary Validation Message error			
	CLIENT	Acknowledge Summary Validation Message error			
	SERVER	Submit Summary error			
5100	CLIENT	XML schema validation error			
5403	CLIENT	EMR Authentication error			
6000	SERVER	Service temporarily unavailable			

SOAP FAULT SAMPLE



7 Appendix B: Grouping, Sorting, Filtering Rules for Client Summary Data

Table 23: Grouping, Sorting, Filtering of Client Summary Data

GROUPING RULES	SORTING RULES	FILTERING RULES			
Health Conditions	and Diagnoses				
Status	By statuses which indicate active or current first, followed by all other statuses.	Include all with no resolved date or where resolved date is no more than 11 years prior to the current date when the EN scheduled process is running			
Surgeries, Procedu	ires and Interventions	, , , , , , , , , , , , , , , , , , , ,			
None	By date with most recent first, in descending order. Partial dates are sorted as though they are as early as possible (e.g. 2019-01 is treated as earlier than 2019-01-20 and later than 2018-06-17). Blank dates appear last.	Include all			
Suspected Allergie	es and Intolerances				
Conditions with a drug code, and Conditions with no drug code	Drug code grouping first, followed by group without drug codes.	Include all			
Prescribed Medica	tions				
None	By medication name (alphabetically), and then by Prescription Written Date, with most recent date first.	 Only include prescriptions that are not considered to be inactive, expired or closed If duplicate prescriptions exist where Medication Name, Medication Dosage and Medication Frequency are the same, filter out all but the most recent Only include prescriptions written within 18 months prior to the current date when the EMR scheduled process is running Do not include prescriptions with no date or no name 			
Vital Signs	I .				
None	By date with most recent first, in descending order.	Include last six (6) dates that contain at least one (1) vital measurement. For each of those dates, include the last recorded vital measurement for each vital element.			



8 Appendix C: Use Case to Requirement Traceability

Table 24: Use Case to Requirement Traceability Matrix

	UC-001	UC-002	UC-003	UC-004	UC-005	UC-006	UC-007
Rqmt ID	Manage Additional Home Clinic Details	Configure Client Summary Service	Identify Required Client Summary Message	Submit Client Summary Data Message(s)	Submit Failed or Halted Client Summary Data Message(s)	Retrieve Client Summary Validation Message(s)	Manage Client Summary Validation Message(s)
HCS001				Х		Х	
HCS002		Х					
HCS003	Х						
HCS004			Х				
HCS005				Х			
HCS006				Х			
HCS007				Х			
HCS008				Х			
HCS009					X		
HCS010				Х			
HCS011						Х	
HCS012						Х	
HCS013						Х	
HCS014				X		Х	
HCS015						Х	Х
HCS016			Х	Х	X	Х	
HCS017		Х					
ENR003	X	Х					
ENR004				X		Х	
ENR005			Х	Х			
ENR017						Х	Х
ENR022							Х



9 Appendix D: Release Notes

Version 1.0 September 11, 2019

Initial release

Version 1.1 November 15, 2019

 Added Assertion requirement HCS017 to indicate that Client Summary functionality cannot be disabled at a Provider-level.

Version 1.2 March 31, 2020

- Updated Related Documents:
 - Added eHealth_hub Authentication Specification
- Created a dependency to the eHealth_hub Authentication Specification
 - The eHealth_hub Authentication Specification contains the previous security requirements and appendices
 - Deleted previous security requirements and appendices
 - o Renamed Security Requirements to Authentication Requirements
 - Updated table references for Tables 6 to 27.
 - Updated appendix references for appendices C and D.