EMR Digital Health Drug Repository (DHDR) 1.0

Requirements

December 13, 2019

Document Version & Status: 1.0 – DFC (Draft for Comment)

Table of Contents

1. INTRODUCTION

1.1 Overview

This document defines requirements for an EMR Offering to integrate with the provincial Digital Health Drug Repository (DHDR) EHR Service, which is hosted on the ONE Access Provider Gateway (provincial Gateway). The intended audiences of this document are business and technical implementers interested in implementing functionality within an EMR Offering to access patients' drug dispense events and pharmacy service events information retrieved from the DHDR EHR Service.

1.2 Scope

1.2.1 In Scope

- Retrieval of drug dispense events and pharmacy service events for patients from the DHDR EHR Service and presenting it in the EMR Offering
- EMR functionality to interact with the Patient Consent Override Interface (PCOI) viewlet to process any encountered consent block of the patient's information in the DHDR EHR Service
- EMR functionality to interact with the PCOI viewlet using patient context management

1.2.2 Out of Scope

- EMR functionality to reconcile prescription events in the EMR Offering and dispensed drug events in the DHDR EHR Service
- Submission of prescription or drug dispense events from the EMR Offering to the DHDR EHR Service

1.3 Assumptions

- Readers have a general understanding of EMRs and clinical workflows
- Readers are familiar with and have an understanding of OntarioMD's EMR specifications
- Readers have a level of understanding of Health Level Seven (HL7) Fast Healthcare Interoperability Resources (FHIR)

1.1 Dependencies

- The DHDR EHR Service is hosted on the provincial Gateway. The EMR Offering must adhere to the "Provincial Gateway" EMR requirements in the EMR EHR Connectivity Specification to connect to the provincial Gateway in order to access the DHDR EHR Service.
- The DHDR EHR Service leverages the PCOI viewlet to temporarily override patient consent. To implement PCOI viewlet functionality, the EMR Offering needs to adhere to the "Viewlets" EMR requirements in the EMR EHR Connectivity Specification.
- The PCOI viewlet leverages patient context sharing to provide the appropriate patient context to the PCOI viewlet. To implement patient context sharing, the EMR Offering needs to adhere to the "Context Management" EMR requirements in the EMR EHR Connectivity Specification.

1.2 Related Documents, References and Sources

ID	NAME	VERSION	DATE
1	Check Medication Coverage – Drug Formulary (Ministry of Health, 2019) https://www.ontario.ca/page/check-medication-coverage/	2.5	2019-12-03
2	Draft High-Level Architecture – Provincial Client Override Interface (eHealth Ontario, 2019) Contact EMR@OntarioMD.com for the most current version available	N/A	2019-10-22
3	EMR EHR Connectivity Specification (OntarioMD, 2019) https://www.ontariomd.ca/emr-certification/emr-specification/library	2.0	2019-12-20
4	EMR Integration with Viewlet Framework – Developer Guide (eHealth Ontario, 2019) Contact EMR@OntarioMD.com for the most current version available	0.1	2019-11-29
5	Information Available to Health Care Providers through the Digital Health Repository (Ministry of Health, 2017) http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/GetFileAttach/014-5056-87E~1/$File/5056-87E.pdf	N/A	2017-03-13
6	Ontario Digital Health Drug Repository (DHDR) – Point of Care Systems Access – HL7 FHIR Implementation Guide (Ministry of Health, 2019) https://www.ehealthontario.on.ca/en/standards/view/digital-health-drug-repository-specification-fhir-release-3 Contact EMR@OntarioMD.com for the most current version available	3.0.3	2019-09-12
7	Special Authorization Digital Information Exchange (SADIE) (Ministry of Health, 2019) http://www.health.gov.on.ca/en/pro/programs/sadie/	N/A	2019-03-26

2. EMR REQUIREMENTS

This section consists of the EMR functional requirements to interact with the DHDR EHR Service.

Support:

M = Mandatory. EMR offerings certified for this specification MUST support this requirement
O = Optional. EMR vendors MAY choose to support this requirement in their certified EMR offering

Status:

N = New requirement for this EMR Specification version
P = Previous requirement
U = Updated requirement from the previous EMR Specification version
R = Retired requirement from the previous EMR Specification version

OMD #:

A unique identifier that identifies each requirement within OntarioMD's EMR Requirements Repository

CONFORMANCE LANGUAGE

The following definitions of the conformance verbs are used in this document:

- **SHALL/MUST** – Required/Mandatory
- **SHOULD** – Best Practice/Recommendation
- **MAY** – Acceptable/Permitted

The tables that follow contain column headings named: 1) "Requirement," which generally contains a high-level requirement statement; and 2) "Guidelines," which contains additional instructions or detail about the high-level requirement. The text in both columns is considered requirement statements.

2.1 EHR Connectivity

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
DHDR01.01	The EMR Offering MUST be able to interface with the DHDR EHR Service.	The EMR Offering MUST support HL7 Fast Healthcare Interoperability Resources (FHIR) messages in accordance with the DHDR HL7 FHIR Implementation Guide to interface with the DHDR EHR Service.	M	N
DHDR01.02	The target connection endpoint(s) to the DHDR EHR Service MUST be configurable.	It is acceptable to restrict the ability to configure the value(s) to only specific roles or responsibilities. **Informational**: The EHR Service endpoint (e.g., URL) may change to implement and test in varying environments, or once in production.	M	N

2.2 Search Medication and Pharmacy Service Dispenses

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
DHDR02.01	The EMR Offering MUST have the functionality to retrieve a patient's dispense history from the DHDR EHR Service.	The EMR Offering MUST generate the Supported Search Parameters (see section 3.6.4 of DHDR HL7 FHIR Implementation Guide) using patient information maintained by the EMR Offering. The following patient data MUST be included in the request to the DHDR EHR Service: a) Health Card Number (HCN) [Patient.identifier.value] If the DHDR EHR Service does not return a unique patient using just the HCN, the EMR MUST automatically re-submit the request with the following additional patient information, if available: b) Date of birth (DOB) [Patient.birthDate] c) Gender [Patient.gender]	M	N

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
		Note: The EMR Offering MUST NOT allow retrieval of dispense events if the mandatory information (i.e., HCN) is unavailable. **Note**: Refer to "Get MedicationDispense" in the Supported Search Parameters section of the Implementation Guide for more detailed information. **Informational**: HCN version code is not currently a supported search parameter in the DHDR EHR Service.		
DHDR02.02	The ability to search the DHDR EHR Service MUST exist in a medication prescription EMR workflow.	The functionality to search the DHDR EHR Service MUST be available from a screen or module within the EMR Offering that intuitively supports a medication prescription workflow.	M	N
DHDR02.03	Patient information stored in the EMR Offering MUST be used to automatically populate DHDR EHR Service search parameters.	The EMR user MUST NOT be required to manually provide values used to populate the DHDR EHR Service search parameters where those values are stored and can be provided by the EMR Offering without intervention from the EMR user. Where patient information is automatically populated by the EMR Offering, it MUST be from a window that explicitly identifies that patient. It is not acceptable to automatically populate information where it may be ambiguous as to which data was used (e.g., from a window that includes two or more patients).	M	N
DHDR02.04	The EMR Offering MUST have the functionality to allow the EMR user to search the DHDR EHR Service for the patient's dispense history by a specified Dispense Date range.	The dispense date range MUST be populated by a default date range of 120 days from the present date. The EMR user MUST have the option to modify the dispense date range. The EMR Offering MAY allow the EMR user to set a different default value on a per-user basis.	M	N

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
DHDR02.05	The EMR Offering MUST inform the EMR user when a search to the DHDR EHR Service for the patient's dispense history returns no records.	The following is a suggested message to display: "No records found for the specified search date/time period." The search period MUST be displayed along with the search results. **Note**: No records being returned may be a result of the patient having no history, or no events existing for the period searched.	M	N
DHDR02.06	The search period MUST be displayed along with all search results.	Whenever a successful search for a patient's dispense history is performed (where zero or more dispense events are returned for the patient), the search period used MUST be displayed along with the search results. The search period MUST be either: a) in a date and time format that is consistent with the one used by the EMR Offering, or b) in the same date and time format as provided by the DHDR EHR Service. The format of the date and time to display SHOULD be consistent with the date and time format used by the EMR Offering, where possible.	M	N

2.3 DHDR EHR Service Record

There are three different views of the dispensed history the EMR Offering is required to support:

1. **Summary View** – Provides a means to list multiple dispense events (collectively the dispense history) for a given patient. Dispense events that share the same generic name, strength, and dosage form are grouped under the most recently dispensed event from that grouping, with the means to show and hide the grouped events.
2. **Comparative View** – Displays a list of medication and prescription information within an EMR for a given patient, with dispense history information from the DHDR EHR Service. The Comparative View does not reconcile information from the EMR and the DHDR EHR Service.
3. **Detailed View** – Provides a means to drill down or expand on a single dispense event to provide more information.

It is acceptable to display the data retrieved from the DHDR EHR Service in descending chronological order (with the most current record first) based on the dispensed date.

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
DHDR03.01	Whenever displaying data retrieved from the DHDR EHR Service, the patient MUST be identified.	The following patient information as maintained in the EMR Offering MUST be displayed: a) Patient first and last name [Patient.name.given], [Patient.name.family] b) Health Card Number (HCN) [Patient.identifier.value] c) Gender [Patient.gender] d) Date of birth [Patient.birthDate]	M	N
DHDR03.02	The EMR Offering MUST include the disclaimer when displaying dispense event(s) retrieved from the DHDR EHR Service.	The following disclaimer MUST be displayed whenever one or more dispense event(s) retrieved from the DHDR EHR Service are displayed: *"Warning: Limited to Drug and Pharmacy Service Information available in the Digital Health Drug Repository (DHDR) EHR Service. To ensure a Best Possible Medication History, please review this information with the patient/family and use other available sources of medication information in addition to the DHDR EHR Service. For more details on the information available in the DHDR EHR Service, please click* [URL]" **Note**: The URL to insert is provided with the reference to the "Information Available to Health Care Providers through the Digital Health Repository" document in the Related Documents, References and Sources section.	M	N

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
		The EMR Offering MUST present the link, as shown above, rendering the contents of the web page/document does not meet this requirement. The link MUST be functional to be able to download or view the content served by the link. The EMR Offering MUST additionally have the functionality to allow the EMR user to temporarily suppress the disclaimer from subsequently displaying and provide the ability for the EMR user to later restore the display of the disclaimer. The ability to suppress and restore this disclaimer MUST be independent of the ability to suppress and restore other disclaimers.		
DHDR03.03	The EMR Offering MUST have the functionality to display all dispense events retrieved from the DHDR EHR Service.	Where dispense events retrieved from the DHDR EHR Service cannot be displayed within one window, the EMR Offering MUST have the functionality to allow the EMR user to navigate through all retrieved dispense events. Additionally, the EMR Offering MUST indicate the total number of search results returned from a search.	M	N
DHDR03.04	The EMR Offering MUST support the filtering of the dispense history retrieved from the DHDR EHR Service.	The EMR Offering MUST allow the EMR user to filter by: a) Generic name [Medication.code.coding[2].display] b) Brand name [Medication.code.coding[1].display] c) Dispensed date [MedicationDispense.whenPrepared] d) Pharmacy Name [Organization.name] e) Prescriber Name [Practitioner.name.family], [Practitioner.name.given] f) Therapeutic Class [Medication.code.coding[3].display] The EMR Offering MUST visually indicate which elements are being actively filtered. **Note**: Any pre-existing filtering capabilities for medication data maintained in the EMR Offering SHOULD be supported in the Comparative View.	M	N

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
DHDR03.05	The EMR Offering MUST display dates and times retrieved from the DHDR EHR Service in a format consistent with that of the EMR Offering.	The date and time formats MUST be consistent with formats used in the EMR Offering. If no consistent date and time format exist in the EMR Offering, then the EMR Offering MUST follow the format provided by the DHDR EHR Service (ISO 8601).	M	N
DHDR03.06	The EMR Offering MUST support the sorting of the dispense history retrieved from the DHDR EHR Service.	The EMR Offering MUST allow the EMR user to sort by: a) Generic name [Medication.code.coding[2].display] b) Brand name [Medication.code.coding[1].display] c) Dispensed date [MedicationDispense.whenPrepared] d) Pharmacy Name [Organization.name] e) Prescriber Name [Practitioner.name.family], [Practitioner.name.given] The EMR Offering MUST visually indicate which elements are being actively sorted. **Note**: Any pre-existing sorting capabilities for medication data maintained in the EMR Offering SHOULD be supported in the Comparative View.	M	N

2.3.1 Summary View – Drug Dispense Events

The following EMR requirements apply to functionality specific to the Summary View for Drug Dispense Events.

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
DHDR04.01	The EMR Offering MUST have the functionality to display the Summary View for drug dispense events.	The following information for each drug dispense event retrieved from the DHDR EHR Service MUST be displayed in the Summary View: Drug Information a) Dispense date [MedicationDispense.whenPrepared]	M	N

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
		b) Generic name of the dispensed drug [Medication.code.coding[2].display] c) Brand name of the dispensed drug [Medication.code.coding[1].display] d) Dispensed drug strength [Medication.extension[1].valueString] e) Drug dosage form (e.g., tablet, capsule, injection) [Medication.form.text] f) Dispensed quantity [MedicationDispense.quantity.value] [MedicationDispense.quantity.unit] g) Estimated days' supply [MedicationDispense.daysSupply.value] <u>Prescriber Information</u> h) Prescriber first and last name [Practitioner.name.given] [Practitioner.name.family] i) Prescriber phone number [Practitioner.telecom[1].value] <u>Pharmacy Information</u> j) Dispensing Pharmacy [Organization.name] k) Dispensing Pharmacy Fax Number [Organization.telecom[2].value] The information MUST be displayed exactly as it is received from the DHDR EHR Service. **Note:** Dispense Date maps to the FHIR element "whenPrepared", NOT to "whenHandedOver" (this element indicates the pickup date, rather than the dispense date). **Note:** It is possible that the EMR may receive a coded value for Dosage Form.		

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
DHDR04.02	The EMR Offering MUST have the functionality to group related dispense events.	Dispense events MUST be grouped together under the dispense event with the most recent Dispense Date where the following values match: a) Generic name of the dispensed drug [Medication.code.coding[2].display] b) Dispensed drug strength [Medication.extension[1].valueString] c) Drug dosage form (e.g., tablet, capsule, injection) [Medication.form.coding.display] Dispense events MUST only be grouped when there are two or more events where the above values match. Displaying a group of dispense events is achieved by displaying only the most recent dispense event according to the Dispense Date within that group. There MUST be functionality to identify a group of dispense events differently than a dispense event that is not part of any group. Information about the group MUST include the count of individual dispense events represented by the group. This count MUST be identified as the “Rx Count”.	M	N
DHDR04.03	The EMR Offering MUST be able to expand a grouping of dispense events.	The EMR Offering MUST have the functionality to allow the EMR user to display the individual drug dispense events in the group.	M	N

2.3.2 Comparative View – Drug Dispense Events

The following EMR requirements apply to functionality specific to the Comparative View for Drug Dispense Events.

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
DHDR05.01	The EMR Offering MUST provide a comparative view of a patient's medication history from the EMR Offering and the drug dispense history from the DHDR EHR Service.	The comparative view MUST display both the EMR Offering and DHDR EHR Service histories on the same screen for a specific patient. Scrolling through a single window is acceptable. The DHDR EHR Service information displayed in the comparative view MUST be the same information displayed in the Summary View. (i.e. Comparative view will have the same information as the Summary view with the addition of medication information maintained in the EMR Offering). When displaying the Comparative View, the EMR Offering MUST display the fully expanded Summary View of medication dispense events retrieved from the DHDR EHR Service (see DHDR04.03); displaying the medication dispense events in their grouped format (DHDR04.02) is NOT acceptable. EMR Offering medication records include, if available, prescription information and medication information. **Note**: This does not require reconciliation functionality between the two sources of data (EMR Offering vs. DHDR EHR Service).	M	N
DHDR05.02	In the Comparative View, dispense events from the DHDR EHR Service MUST be distinguishable from the medication events maintained by the EMR Offering.		M	N
DHDR05.03	The EMR Offering MUST have the functionality to allow the user to show and hide the patient's DHDR EHR Service dispense history in the Comparative View.	Hiding the dispense history retrieved from the DHDR EHR Service will result in only the medication records maintained in the EMR Offering being displayed.	M	N

2.3.3 Detailed View – Drug Dispense Events

The following EMR requirements apply to functionality specific to the Detailed View for Drug Dispense Events.

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
DHDR06.01	The EMR Offering MUST have the functionality to display the Detailed View.	The following information for each dispense event retrieved from the DHDR EHR Service MUST be displayed in the Detailed View: a) All information required in the Summary View In addition, the Detailed View MUST display the following information: <u>Drug Information</u> b) Drug Identification Number (DIN) or Product Identification Number (PIN) [Medication.code.coding[1].code] c) Medical Condition/Reason for Use (see "reasonCode" in MedicationRequest Profile) d) Therapeutic Class [Medication.code.coding[3].display] e) Therapeutic Sub-Class [Medication.code.coding[4].display] f) Current Rx Number [MedicationDispense.identifier.value] <u>Prescriber Information</u> g) Prescriber ID (e.g., practitioner license or CPSO number) [Practitioner.identifier.value] h) ID Reference [Practitioner.identifier.system] <u>Pharmacy Information</u> i) Pharmacist Name [Practitioner.name.given] [Practitioner.name.family] j) Pharmacy Phone Number [Organization.telecom[1].value]	M	N

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
		It is acceptable to leverage and expand on the Summary View, instead of creating a separate View, if all information included in the Detailed View is displayed on the same screen. **Note**: A medication dispense event can have a Drug Identification Number (DIN) or a Product Identification Number (PIN). A pharmacy service event can only have a PIN.		

2.3.4 Summary View – Pharmacy Service Events

The following EMR requirements apply to functionality specific to the Summary View for Pharmacy Service Events.

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
DHDR07.01	The EMR Offering MUST have the functionality to display the Summary View for pharmacy service events.	The following information for each pharmacy service event retrieved from the DHDR EHR Service MUST be displayed in the Summary View: <u>Service Information</u> a) Last Service Date [MedicationDispense.whenPrepared] b) Pharmacy Service Type [MedicationDispense.medicationReference.Medication.code.coding[1].display] c) Pharmacy Service Description [MedicationDispense.medicationReference.Medication.code.coding[2].display] <u>Pharmacy Information</u> d) Pharmacy Name [Organization.name] e) Pharmacist Name [Practitioner.name.given] [Practitioner.name.family]	M	N

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
		f) Pharmacy Phone Number [Organization.telecom[1].value]		
DHDR07.02	The EMR Offering MUST have the functionality to group related pharmacy service events.	Pharmacy service events MUST be grouped together under the pharmacy service event with the most recent Service Date where the following values match: a) Pharmacy Service Type [MedicationDispense.medicationReference.Medication.code.coding[1].display] The EMR Offering MUST display the Count (the number of individual service events in the grouping) associated with each summarized line item.	M	N
DHDR07.03	The EMR Offering MUST be able to expand a grouping of pharmacy service events.	The EMR Offering MUST have the functionality to allow the EMR user to display the individual pharmacy service events in the group.	M	N

2.3.5 Comparative View – Pharmacy Service Events

The following EMR requirements apply to functionality specific to the Comparative View for Pharmacy Service Events.

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
DHDR08.01	The EMR Offering MUST provide a comparative view of a patient's medication history from the EMR Offering and the pharmacy service history from the DHDR EHR Service.	The comparative view MUST display both the EMR Offering and DHDR EHR Service histories on the same screen for a specific patient. Scrolling through a single window is acceptable. The DHDR EHR Service information displayed in the comparative view MUST be the same information displayed in the Summary View. (i.e. Comparative view will have the same information as the Summary view with the addition of medication information maintained in the EMR Offering). When displaying the Comparative View, the EMR Offering MUST display the fully expanded Summary View of pharmacy service events retrieved from	M	N

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
		the DHDR EHR Service (see DHDR06.03); displaying the pharmacy service events in their grouped format (DHDR06.02) is NOT acceptable. EMR Offering medication records include, if available, prescription information and medication information. **Note**: This does not require reconciliation functionality between the two sources of data (EMR Offering vs. DHDR EHR Service).		
DHDR08.02	In the Comparative View, dispense events from the DHDR EHR Service MUST be distinguishable from the medication events maintained by the EMR Offering.		M	N
DHDR08.03	The EMR Offering MUST have the functionality to allow the user to show and hide the patient's DHDR EHR Service dispense history in the Comparative View.	Hiding the dispense history retrieved from the DHDR EHR Service will result in only the medication records maintained in the EMR Offering being displayed.	M	N

2.4 Temporary Patient Consent Unblock

The following EMR requirements in this section and sub-sections apply where a consent block directive is returned by the DHDR EHR Service.

2.4.1 Identifying a Patient Consent Directive

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
DHDR09.01	The EMR Offering MUST be able to handle a consent block directive received from the DHDR EHR Service.	When attempting to retrieve the patient's dispense history, the EMR Offering MUST be able to recognize when a response from the DHDR EHR Service identifies a consent block directive. The following message MUST be displayed to the EMR user: *"Access to Drug and Pharmacy Service information has been blocked by the patient."* **Note**: Refer to the "Consent Indicator in OperationOutcome" section in the DHDR HL7 FHIR Implementation Guide to identify a consent block.	M	N
DHDR09.02	The EMR Offering MUST prompt the EMR user with choices to respond to the temporary consent block.	The EMR Offering MUST provide the EMR user with the following choices: a) **Continue** (The patient wishes to proceed with consent unblock) b) **Refuse** (The patient refuses to unblock consent) The EMR Offering MUST provide the user with the ability to navigate away from the choice or to cancel the process in some way (e.g. closing the window) without having to select either of the above choices. The EMR Offering MUST NOT log an action that cancels the workflow as a refusal. The EMR Offering MUST log the choice selected and the reason, where applicable.	M	N

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
		To proceed with the consent unblock (where the patient chooses "Continue"), refer to section "4.5.2: Proceeding with a Temporary Consent Unblock". Although there is supporting functionality documented in the "Ontario Digital Health Drug Repository (DHDR) – Point of Care Systems Access – HL7 FHIR Implementation Guide", the EMR Offering MUST NOT proceed by requesting a Temporary Consent Unblock directly with the DHDR EHR Service (using the available API).		
DHDR09.03	The EMR Offering MUST inform the EMR user if a temporary consent unblock is chosen to be refused or cancelled.	Where the EMR user chooses not to proceed with a consent override, the EMR Offering MUST display the following appropriate message: Message to display if the response is **Refuse** *"Access to Drug and Pharmacy Service Information has been refused by the patient."* Message to display if the response is **Cancel with the reason given** *"Access to Drug and Pharmacy Service Information has been cancelled."*	M	N

2.4.2 Proceeding with a Temporary Consent Override

The following section (and its sub-sections) defines EMR requirements to proceed with a Temporary Consent Override request by the EMR Offering to the DHDR EHR Service after the patient has accepted consent. The DHDR EHR Service will need patient context to be set and the PCOI viewlet launched which will collect all the necessary information to accept the patient's consent. Once patient consent information is collected and complete, the viewlet will automate the request to temporarily override consent for the requesting clinic organization to which the EMR user belongs. Although there is supporting functionality documented in the "Ontario Digital Health Drug Repository (DHDR) – Point of Care Systems Access – HL7 FHIR Implementation Guide", the EMR Offering needs to follow functionality defined in this section.

2.4.2.1 Setting the Patient Context in the CMS

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
DHDR10.01	The EMR Offering MUST adhere to all Context Sharing requirements.	When setting the patient context, the EMR Offering MUST adhere to the requirements set out in the Context Sharing document in the EMR EHR Connectivity Specification. Refer to the Dependencies section of this document for more details.	M	N
DHDR10.02	The EMR Offering MUST be able to set the patient context in the CMS.	If the patient wishes to continue with the consent unblock (see DHDR08.16), the EMR Offering MUST submit the patient context to the CMS. The following information is required to be submitted to the CMS: a) Continuous GUID and CSID b) Organization c) Provider d) Patient e) Custom Fields **IMPORTANT:** Specific fields to be supported will be determined. Refer to the "Draft High Level Architecture – Provincial Client Override Interface" document for details to set the patient context in the CMS.	M	N

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
		IMPORTANT: It is required that the EMR Offering request a temporary patient consent unblock to the PCOI viewlet immediate after setting the patient context.		

2.4.2.2 Initiating a Consent Override Request to the PCOI viewlet

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
DHDR10.03	The EMR Offering MUST request a temporary patient consent unblock request to the PCOI viewlet *after* the patient context has been set in the CMS.	The EMR Offering MUST submit the following data to the PCOI viewlet to initiate a temporary unblock request: <u>Practitioner Information</u> a) Practitioner Identifier, if available (e.g., CPSO or CNO) b) Practitioner first name and last name <u>Other Information</u> c) Language to display (i.e., English or French) d) EHR Service ID **IMPORTANT**: It is required that the EMR Offering set the patient context prior to requesting a temporary patient consent unblock request to the PCOI viewlet. Refer to PCOI Interface Guide for more details.	M	N

2.4.2.3 Handling Consent Override Responses from the PCOI viewlet

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
DHDR11.01	The EMR Offering MUST be able to process possible PCOI viewlet responses.	Once the PCOI viewlet processes the consent override request, it will respond with the result. The EMR Offering MUST be able to process the following possible responses returned from the PCOI viewlet: a) Successful: Consent has been overridden See DHDR08.07 and DHDR08.08 b) Failed: Consent was not accepted or failed See DHDR08.09 The responses may be provided as an Operation Outcome. Refer to the PCOI Interface Guide for more details	M	N
DHDR11.02	The EMR Offering MUST be able to support the PCOI viewlet print functionality.	The EMR Offering MUST have the ability to support printing from the PCOI viewlet to be able to print to a local printer.	M	N
DHDR11.03	Where patient consent override was successful, the EMR Offering MUST notify the EMR user that the consent is temporarily unblocked.	The following message MUST be displayed: *"The patient has temporarily unblocked access to view and use their drug and pharmacy information."*	M	N
DHDR11.04	Where patient consent override was successful, the EMR Offering MUST re-request and display the patient's drug and pharmacy service information from the DHDR EHR Service.	The EMR Offering MUST be able to automatically re-submit the drug and pharmacy service information from the DHDR EHR Service that was originally submitted prior to the temporary consent unblock.	M	N

2.5 Ontario Drug Benefit (ODB) Formulary and Exceptional Access Program (EAP)

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
DHDR12.01	The EMR Offering MUST provide a link to the ODB Formulary within the EMR workflow used to prescribe medication.	The link to the ODB Formulary MUST be provided to the EMR user. Refer to Rx Checker – Drug Formulary for the Uniform Resource Locator (URL). The link MUST be made available on the same screen where the EMR user inputs the required information for a prescription. It is acceptable to implement functionality to open an external browser to the Drug Formulary. It is recommended to make the URL a configurable value. It is acceptable to restrict authorization to change the value to limited EMR user(s). **Informational**: The Drug Formulary displays a brand name, generic name, and coverage data, and does not maintain pricing information. It provides coverage data to inform decisions.	M	N
DHDR12.02	The EMR Offering MUST provide a link to the EAP within the EMR workflow used to prescribe medication.	The link to the EAP MUST be provided to the EMR user. Refer to "Special Authorization Digital Information Exchange" (SADIE) in the Related Documents, References and Sources section for the URL. The link MUST be made available on the same screen where the EMR user inputs the required information for a prescription. It is acceptable to implement functionality to open an external browser to the Drug Formulary. It is recommended to make the URL a configurable value. It is acceptable to restrict authorization to change the value to limited EMR user(s). **Informational**: SADIE is a portal for submitting EAP drug requests for ODB recipients. It aids to streamline EAP drug requests.	M	N

2.6 Printing and Reporting

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
DHDR13.01	EMR Offering MUST provide a function to print the patient's medication dispense and pharmacy service histories.	The print functionality MUST support all of the following required views: a) Print a Summary View (both types of dispenses) b) Print a Detailed View (drug dispenses only) c) Print a Comparative View (both types of dispenses) The print functionality MUST: a) Contain all data elements required for the View being printed b) Contain all the events retrieved from a request (i.e. not just the events that fit on-screen at the time of printing) c) Include the Patient's name and demographic information d) Be ordered in reverse chronological order by dispense date (most recent dispense date first) e) Indicate the page number on each page printed f) Contain a record count to indicate the total number of records displayed g) Contain the date and time printed When printing the Summary View, the EMR Offering MUST print the fully expanded format of the Summary View; printing only the grouped format of the information retrieved is NOT acceptable. It is suggested that, if the EMR Offering maintains any applied filters and sorting criteria for the printed copy, a disclaimer is provided on the printed copy indicating that the information displayed is a filtered and/or sorted list of the original records retrieved from the DHDR EHR Service.	M	N
DHDR13.02	The EMR Offering MUST include the disclaimer when printing dispense	The following message MUST be included on each page for which dispense event(s) are printed:	M	N

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
	history retrieved from the DHDR EHR Service.	*"Warning: Limited to Drug and Pharmacy Service Information available in the Digital Health Drug Repository (DHDR) EHR Service. To ensure a Best Possible Medication History (BPMH), please review this information with the patient/family and use other available sources of medication information in addition to the DHDR EHR Service."* Note: The disclaimer MUST be included on the printed record regardless if the EMR user has suppressed the disclaimer from their view when retrieving information from the DHDR EHR Service (see DHDR03.02).		
DHDR13.03	The EMR Offering MUST be able to generate a report on all temporary consent unblock requests submitted to the DHDR EHR Service.	The report MUST include the following information: a) Date and Time consent unblock was requested b) The message identifier of the consent response returned from the DHDR EHR Service c) The DHDR EHR Service system identifier for the patient whose record is blocked d) The EMR user who requested the temporary consent unblock e) The status of the request (success or failure)	M	N
DHDR13.04	When printing the patient's dispense history, the print functionality MUST include a confidentiality statement.	The confidentiality statement MUST be displayed on each page printed.	M	N

2.7 Error and Warning Management

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
DHDR14.01	The EMR Offering MUST be able to provide notification to the EMR user of errors received from the DHDR EHR Service.	The EMR user MUST be notified of any error or warning messages received from the DHDR EHR Service. This also includes when there is a lack of communication from the EHR Service.	M	N

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
		It is suggested that notifications to the EMR user be user-friendly. At a minimum, the notification MUST inform the EMR user who initiated the transaction with the EHR Service. Simply logging of the error is not sufficient. Warning messages MUST be clear, concise and provide the user with appropriate direction to resolve the issue or receive support. Refer to the "HTTP Response Codes" section of the DHDR FHIR Implementation Guide for more details on error messages that can be returned by the DHDR EHR Service.		

2.8 Logging and Auditing

EMR systems log various information and interactions and may contain private health information (PHI). As a result, consideration should be taken to log only what is necessary to avoid unintentionally saving or providing access to logged PHI and should be regarded with the same sensitivities as data containing PHI.

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
DHDR15.01	The EMR Offering MUST record attempted interactions with the DHDR EHR Service.	At a minimum, the following information MUST be logged for each interaction: a) Message or transaction identifier(s) b) Date and time the transaction was initiated c) The EMR user (or system) that initiated the transaction d) The transaction status (success, failure) e) Any error, success message returned by the EHR Service f) The transaction action attempted g) An identifier for the patient related to the transaction	M	N

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
		The above information MUST be accessible from within the EMR interface by an EMR user. It is acceptable to restrict access to specific EMR users. Additional information SHOULD be logged within the EMR Offering, as necessary, to facilitate troubleshooting and auditing. Any submission of temporary consent unblock requests MUST also be logged as part of this requirement. Log entries MUST be retained in accordance with regulations governed by The Medicine Act, 1991. Precautions MUST be taken where personal information (PI) or personal health information (PHI) is logged. Refer to the "HTTP Response Codes" section of the DHDR FHIR Implementation Guide for more details on error messages that can be returned by the DHDR EHR Service.		
DHDR15.02	The EMR Offering MUST log any refusals to override a patient consent directive.	The EMR Offering MUST log all refusals to a patient consent directive. At a minimum, the following information MUST be logged: a) Message or transaction identifier(s) relating to the dispense history to unblock b) Date and time of the refusal c) The EMR user that initiated the transaction d) The transaction action attempted e) An identifier for the patient related to the transaction	M	N
DHDR15.03	The EMR Offering MUST log each instance where an EMR user chooses to suppress the disclaimer displayed when retrieving information from the DHDR EHR Service.		M	N

3. APPENDIX A: ADDITIONAL REFERENCES

The following are supporting documentation and recommended reading.

ID	NAME	VERSION	DATE
1	Best Possible Medication History (Canadian Patient Safety Institute, n.d.) mailto:https://www.patientsafetyinstitute.ca/en/Topic/Pages/Best-Possible-Medication-History.aspx	N/A	N/A
2	Health Care Provider Access to Drug and Pharmacy Service Information – Questions and Answers (Ministry of Health, 2017) http://www.ontario.ca/mydruginfo	N/A	2019-04-18
3	HL7 FHIR Release 4 (Health Level Seven, 2019) https://hl7.org/fhir/	4.0.1	2019-11-01
4	Medicine Act, 1991 (Ministry of Health, 2009) https://www.ontario.ca/laws/statute/91m30	N/A	2009-12-15
5	Temporary Unblocking of Access to Drug and Pharmacy Service Information Form (Ministry of Health, 2016) http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/FormDetail?OpenForm&ACT=RDR&TAB=PROFILE&SRCH=1&ENV=WWE&TIT=5047-87&NO=5047-87E	N/A	2016-11

4. APPENDIX B: DHDR DATA ELEMENTS – FHIR MAPPING

Note that the following tables do NOT contain ALL elements returned from the DHDR EHR Service.

4.1 FHIR Mapping for Medication Dispense Events

A dispense event is considered a medication dispense event when the FHIR element MedicationDispense.category.coding.code's value is 'drug'.

DATA FIELD	DESCRIPTION	FHIR MAPPING
Patient First Name	First name of patient	MedicationDispense.subject.Patient.name.given
Patient Last Name	Last name of patient	MedicationDispense.subject.Patient.name.family
Patient Gender	Gender of patient	MedicationDispense.subject.Patient.gender
Patient Date of Birth	Date of birth of the patient	MedicationDispense.subject.Patient.birthDate
Health Number	Number on an Ontario Health Card that uniquely identifies a patient	MedicationDispense.subject.Patient.identifier[1].value
Dispensed Date	Transaction date when the prescription drug was dispensed or when the pharmacy service was rendered	MedicationDispense.whenPrepared
Generic Name	Non-proprietary name or generic name of the drug dispensed (e.g. diclofenac sodium). For Pharmacy Services, this field will contain the description of the pharmacy service rendered by a pharmacist (e.g. Medication review for diabetes follow-up)	MedicationDispense.medicationReference.Medication.code.coding[2].display
Brand Name	Brand name or trade name of the prescription drug dispensed (e.g. Voltaren). For Pharmacy Services, this field will contain the pharmacy service type (e.g. MedsCheck)	MedicationDispense.medicationReference.Medication.code.coding[1].display
Strength	Strength of the prescription drug; amount of active ingredient in the prescription drug dispensed (e.g. 100 mg)	MedicationDispense.medicationReference.Medication.extension[1].valueString

DATA FIELD	DESCRIPTION	FHIR MAPPING
Dosage Form	The physical form of a dose of a drug product (e.g., suppository)	MedicationDispense.medicationReference.Medication.form.text
Therapeutic Classification Name	Pharmacologic therapeutic classification of the prescription drug dispensed (e.g., analgesics nonsteroidal)	MedicationDispense.medicationReference.Medication.code.coding[3].display
Therapeutic Sub-Classification Name	Pharmacologic therapeutic sub-classification of the prescription drug dispensed. (e.g. anti-inflammatory agent)	MedicationDispense.medicationReference.Medication.code.coding[4].display
Quantity	Quantity of medication dispensed	MedicationDispense.quantity.value MedicationDispense.quantity.unit
Estimated Days Supply	Estimated number of days of treatment based on the directions for use on the prescription and/or the pharmacist's judgment on usage	MedicationDispense.daysSupply.value
Drug Identification Number (DIN)/Product Identification Number (PIN)	Drug Identification Number (DIN) assigned by Health Canada to every drug (e.g., Voltaren – DIN 00514012) Product Identification Number (PIN) assigned by the MOH to every pharmacy service (e.g., MedsCheck - PIN 93899981) and some drugs	MedicationDispense.medicationReference.Medication.code.coding[1].code
Medical Condition/Reason for Use	Indicates the prescriber's designation of the medical condition for which the patient is being treated. This data field is only available for Limited Use products (e.g., Acarbose, Aflibercept)	MedicationDispense.authorizingPrescription.MedicationRequest.reasonCode.coding.code MedicationDispense.authorizingPrescription.MedicationRequest.reasonCode.coding.display
Current Prescription Number	The number assigned by the pharmacy that appears on the label of the dispensed prescription	MedicationDispense.identifer.value
Prescriber Name	Name of the prescriber that provided the prescription or ordered the pharmacy service	MedicationDispense.authorizingPrescription.MedicationRequest.requester.Practitioner.name.family MedicationDispense.authorizingPrescription.MedicationRequest.requester.Practitioner.name.given
Prescriber Phone Number	Phone number of the prescriber that provided the prescription or ordered the pharmacy service	MedicationDispense.authorizingPrescription.MedicationRequest.requester.Practitioner.telecom[1].value

DATA FIELD	DESCRIPTION	FHIR MAPPING
Prescriber ID	Identification number of the prescriber of medication, supplies or professional service issued by their licensing college	MedicationDispense.authorizingPrescription.MedicationRequest.requester. Practitioner.identifer.value
Prescriber ID Reference	The Prescriber ID Reference is used in conjunction with the Prescriber ID where it identifies the registration authority (e.g., college) that assigned the identification number to the prescriber of the medication	MedicationDispense.authorizingPrescription.MedicationRequest.requester. Practitioner.identifer.system
Pharmacist Name	Name of the pharmacist or dispensing physician that dispensed the prescription or rendered the pharmacy service * Always available in the Narcotics Management System (NMS). Available in ODB if the pharmacist rendered a pharmacy service or was involved in the intervention of a drug-to-drug interaction DUR alert.	MedicationDispense.performer[2].actor.Practitioner.name.family MedicationDispense.performer[2].actor.Practitioner.name.given
Pharmacy Name	Name of the pharmacy that dispensed the prescription or rendered the pharmacy service	MedicationDispense.performer[1].actor.Organization.name
Pharmacy Phone Number	Telephone number of the pharmacy that dispensed the prescription or rendered the pharmacy service	MedicationDispense.performer[1].actor.Organization.telecom[1].value
Pharmacy Fax Number	Fax number of the pharmacy that dispensed the prescription	MedicationDispense.performer[1].actor.Organization.telecom[2].value

4.2 FHIR Mapping for Pharmacy Service Events

A dispense event is considered a pharmacy service event when the FHIR element MedicationDispense.category.coding.code's value is 'service'.

DATA FIELD	DESCRIPTION	FHIR MAPPING
Patient First Name	First name of the patient	MedicationDispense.subject.Patient.name.given
Patient Last Name	Last name of the patient	MedicationDispense.subject.Patient.name.family

DATA FIELD	DESCRIPTION	FHIR MAPPING
Patient Gender	Gender of the patient	MedicationDispense.subject.Patient.gender
Patient Date of Birth	Date of birth of the patient	MedicationDispense.subject.Patient.birthDate
Health Number	Number on an Ontario Health Card that uniquely identifies the patient	MedicationDispense.subject.Patient.identifier[1].value
Service Date	Transaction date when the pharmacy service was rendered	MedicationDispense.whenPrepared
Pharmacy Service Description	Description of the pharmacy service rendered by a pharmacist (e.g., Medication review for diabetes follow-up)	MedicationDispense.medicationReference.Medication.code.coding[2].display
Pharmacy Service Type	The type of pharmacy service that was rendered (e.g., MedsCheck, Smoking Cessation)	MedicationDispense.medicationReference.Medication.code.coding[1].display
Pharmacist Name	Name of the pharmacist that rendered the pharmacy service	MedicationDispense.performer[2].actor.Practitioner.name.family MedicationDispense.performer[2].actor.Practitioner.name.given
Pharmacy Name	Name of the pharmacy that rendered the pharmacy service	MedicationDispense.performer[1].actor.Organization.name
Pharmacy Phone Number	Telephone number of the pharmacy that rendered the pharmacy service	MedicationDispense.performer[1].actor.Organization.telecom[1].value
Pharmacy Fax Number	Fax number of the pharmacy that rendered the pharmacy service	MedicationDispense.performer[1].actor.Organization.telecom[2].value

4.3 FHIR Mapping Consent SDM Relationship Type Fields

DISPLAY VALUE	FHIR CODE (RELATEDPERSON.RELATIONSHIP.CODING.CODE)	SYSTEM (RELATEDPERSON.RELATIONSHIP.CODING.SYSTEM)
Attorney for Personal Care	ATTPC	https://ehealthontario.ca/API/FHIR/NamingSystem/ca-on-personal-relationship
Representative Appointed by Consent and Capacity Board	CCBOARDREP	https://ehealthontario.ca/API/FHIR/NamingSystem/ca-on-personal-relationship
Child	CHILD	http://hl7.org/fhir/v3/RoleCode
Spouse/ Partner	DOMPART/ SPS	http://hl7.org/fhir/v3/RoleCode
Other Relative	EXT	http://hl7.org/fhir/v3/RoleCode
Guardian of the Person	GUARD	http://hl7.org/fhir/v3/RoleCode
Parent	PRN	http://hl7.org/fhir/v3/RoleCode
Sibling	SIB	http://hl7.org/fhir/v3/RoleCode