DRO Integration Resources Overview

Overview

This document provides guidelines to help you meet the Program requirements. For more details, visit the Program website at http://www.phsa.ca/health-professionals/professional-resources/digital-health/digital-health-initiatives/digital-referrals-orders

The website is your main resource for updates, documentation, and support throughout the process.

Current Integration Scope	
eReferral • eOrder (Direct MI/DI), Community	This function facilitates electronic referrals to assure better continuity of care between providers Current use cases include request for service and direct referrals to diagnostic imaging (DI), medical imaging (MI), and community services
Future Integration Scope	
Patient Engagement	Patient Engagement combines your existing Patient Engagement EMR functionality to integrate with the ecosystem (such as standard Forms) as well as tools like online booking, secure messaging, and patient notifications
eConsult	eConsult will enable virtual consultation requests and responses between primary care providers and specialists
eOrder (Lab)	Building on the recent launch of direct eOrder for imaging and community services, future plans include expanding to support lab requisition orders such as the BC Standard Out Patient Laboratory Requisition
eReferral • Consult Reports • Client Registry Data Sync	Upcoming eReferral enhancements aim to include Consult reports and client registry data synchronization
eSubmission	Future eSubmission functionality will provide a standardized way to submit forms and documentation electronically

Additional Resources and References

- Digital Referrals & Orders Program
- DRO Current Product Offerngs
- Introducing eReferrals
- PHSA Connected Health Journey (Video)
- DRO Referral Demo (Video)
- Doctors of BC Advocacy & Initiatives Article
- DRO Family Practice Overview (Infosheet)
- DRO Specialist Overview (Infosheet)

Contents

Build The Integration

eReferral DRO Common Use Cases

"Sender" eReferrals Usecases

When acting as the "Sending POS", your POS is responsible for initiating referrals or consultations and packaging all required information for transmission to OceanMD. This includes providing details on the patient, Service Request, responding to requests for additional information, and any supporting documents that the "Receiving POS" may need to make informed care decision

	Use Case	Description	Incidence	Exclusion Implications
Required	**Initiate New Service Request**	Creating a Service Request with patient details, request information, and practitioner data for transmission to OceanMD	N/A	N/A
	Update Existing Service Request	Making updates to the referral request, such as changes in urgency or referral notes, attachments, and notifying the request recipients This integration is currently **not supported** as a "Sending POS"	N/A	N/A
	Receive Acknowledgement for new Service Requests	Receive and process provided status (e.g., In Progress, On Hold).	N/A	N/A
	Receive and Process Status Updates existing Service Requests	Receive and process provided status updates for the Service Request (e.g., In Progress, Completed)	N/A	N/A
	Confirm completion of the Service Request	Finalize the referral as complete (e.g. Completed task), once confirmed by the "Receiving POS" This integration is currently **not supported** as a "Sending POS".	N/A	N/A
Strongly Recommended	**Send Supporting Information and attachments**	Attaching clinical information and files to the Service Request	Common	• Manual workaround to save and upload

				• Decreased usability, acceptance, and uptake due to cumbersome or time intensive work arounds
	Receive and Process Appointment Details (New)	Receive and process provided Notification of Appointments created in response to the Service Request	Always	• Lack of transparency into the status of a request increasing administrative time to follow up • Decreased usability, acceptance, and uptake due to cumbersome or time intensive work arounds
	Receive and Process Appointment Details (Updates)	Receive and process provided Notification of Appointments updated in response to the Service Request	Always	• Lack of transparency into the status of a request increasing administrative time to follow up • Decreased usability, acceptance, and uptake due to cumbersome or time intensive work arounds
	Cancel the Service Request	Cancel an active Service Request This integration is currently **not supported** as a "Sending POS"	Usual	• Manual workaround to login to OceanMD Portal to make required Updates • Patient Safety Risk - Manually update request in POS with cancelation • Decreased usability, acceptance, and uptake due to cumbersome or time intensive work arounds

	Receive Data Corrections Notifications	Receive and process notifications for any data corrections This integration is currently **not supported** as a "Sending POS"	Usual	• Manual workaround to login to OceanMD Portal to make required Updates • Patient Safety Risk - Manually update POS with newest information
Desirable	**Exchange Communications**	Exchange communications to the "Receiving POS" This integration is currently **not supported** as a "Sending POS"	Usual	• Patient safety risks with missing information or delayed access to care • Using unencrypted methods increase risk of patient information data breach • Manual transcription of requests risk of inconsistencies and omissions • Decreased usability, acceptance, and uptake due to cumbersome or time intensive work arounds

"Receiver" eReferrals Usecases

When acting as the "Receiving POS", your POS, must be able to receive and process referrals and consultations, acknowledge receipt, and update the request status. This role involves both parsing incoming data and sending Service Request updates back to the to the "Sending POS", via OceanMD as the request progresses.

	Use Case	Description	Incidence	Exclusion Implications
Required	Receive New Service Request	Accepts any incoming Service Requests received from OceanMD, including patient details, form data, request information, and practitioner data	N/A	N/A
	Send Acknowledgement of Receipt of New Service Request	Sends an acknowledgment back to the "Sending POS" confirming receipt of the New Service Request	N/A	N/A
	Send Service Request Status	Send updates to the "Sending POS" as updates are made to the Service Request (e.g., Received, In Progress, Completed)	N/A	N/A
	Receive Service Request Cancellation	Receiving POS processes a cancellation request received from the "Sending POS"	N/A	N/A
Strongly Recommend	Receive and attach supporting documentation to a referral	Attaching clinical information and files to the Service Request	Common	• Manual workaround to save and upload • Decreased usability, acceptance, and uptake due to cumbersome or time intensive work arounds
	Send Acknowledgement of Receipt of Updated Service Request	Sends an acknowledgment back to the "Sending POS" confirming receipt of the Service Request Updates	Usual	• Lack of transparency into the status of a request increasing administrative time to follow up • Decreased usability, acceptance, and uptake due to cumbersome or time intensive work arounds

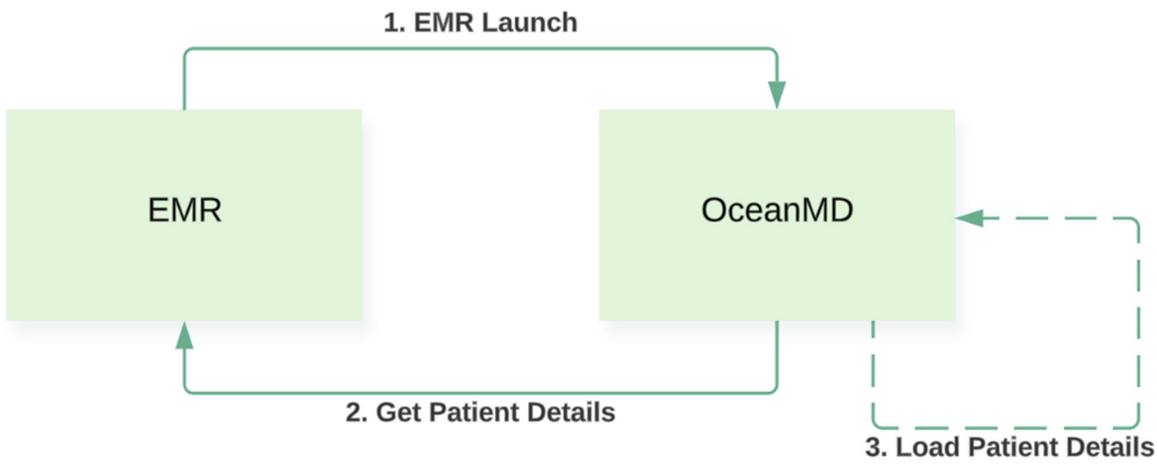
	Send Appointment Details (New)	Sends notifications to the "Sending POS" of new appointments	Always	• Using unencrypted methods to communicate increase risk of patient information data breach • Manual transcription of requests risk of inconsistencies and omissions • Decreased usability, acceptance, and uptake due to cumbersome or time intensive work arounds
	Send Appointment Details (Updates)	Sends notifications to the "Sending POS" of updated appointments	Always	• Using unencrypted methods to communicate increase risk of patient information data breach • Manual transcription of requests risk of inconsistencies and omissions • Decreased usability, acceptance, and uptake due to cumbersome or time intensive work arounds
	Send Data Correction Notification	Sends a notification to the "Sending POS" if any data corrections are made to the Service Request	Usual	• Patient Safety Risk - Manually update POS with newest information
	Send Request for Additional Information	Request further details or missing information from the "Sending POS", as needed to complete the Service Request	Usual	• Patient safety risks with missing information or delayed access to care • Using unencrypted methods increase risk of patient information data breach • Manual transcription of requests risk of inconsistencies and omissions

				• Manually attaching received information to the patient encounter increases risk of misfiling information to the wrong chart • Decreased usability, acceptance, and uptake due to cumbersome or time intensive work arounds
Desirable	**Exchange Communications**	Exchange communications to the "Sending POS"	Usual	• Patient safety risks with missing information or delayed access to care • Using unencrypted methods increase risk of patient information data breach • Manual transcription of requests risk of inconsistencies and omissions • Decreased usability, acceptance, and uptake due to cumbersome or time intensive work arounds

General Usecases

	Use Case	Description
Strongly Recommend	Auto-Match Patient to Received eRequest in "Receiving POS"	POS Auto-Matches (or attempts to) Match based on received Patient Demographics information. Auto-creation of New Patients is optional.
	Support Multiple Ocean Sites (per POS Account)	POS is able to support multiple configurations to more than one Ocean Site and/or Listing

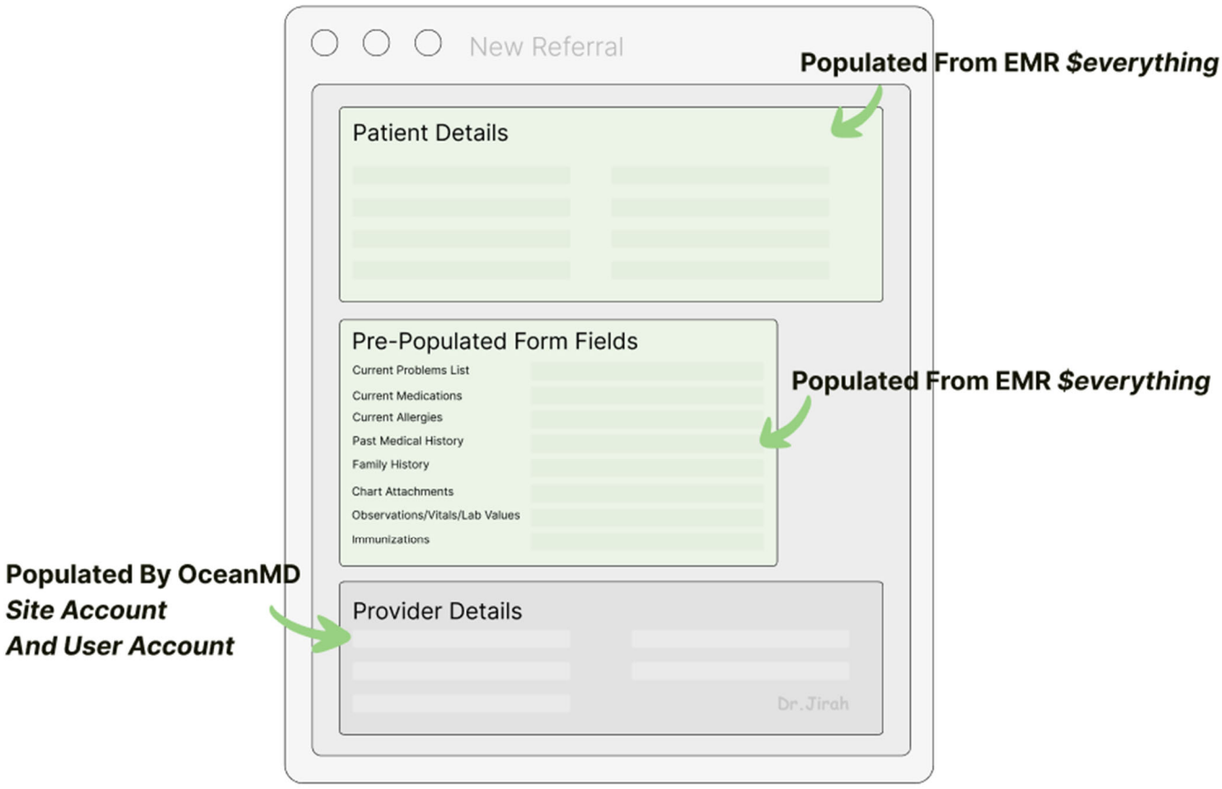
Practical Guide to SMART Launch and FHIR IG



Here's what to expect when you set up SMART on FHIR Launch for integrating OceanMD with your POS. This process enables your users to login to the OceanMD app without having to login to Ocean. Keep in mind, if they have not setup an account or Site, they will need to do so for this to work. This launch provides secure, context-specific access to patient data, likely based on the chart it is launched on, for example.

1. To start, you'll need to register OceanMD as an authorized client within your POS. This step establishes a trusted connection, allowing OceanMD to request access to specific data when launched. During registration, you'll define the scopes that control what data OceanMD can access, such as patient demographics or service requests. At minimum, "Patient read" access is required.
2. Next, configure the launch process by setting up a launch URL within the POS so that logged in users can open OceanMD directly from a patient record. After an oAuth authorization process is completed, the launch button allows the POS to pass relevant Patient Context (and any other FHIR Context) into OceanMD This allows OceanMD to pull the data from the POS that is needed for the referral workflow. The recommended approach is to use the FHIR $everything operation if supported.
3. Ocean will use load the retrieved patient data to pre-populate referral forms once a Listing is located on the OceanMD Healthmap. This data should ideally include medications, allergies, problem list, past medical history, family history, chart attachments, observations, vitals, lab values, and immunizations.

The SMART on FHIR Launch relies on OAuth protocols to manage secure, session-based access to patient data. For your POS, this means configuring OAuth to issue access tokens when a user launches OceanMD, allowing the app to retrieve only the data needed for the referral process. Make sure to set up token expiration to automatically limit session duration, and if supported, enable token refresh to allow OceanMD to request a new token for extended access without requiring the user to log in again.



A Word on Data: Keyword Population and Patient Summary (Cumulative Patient Profile)

In order to enable the population of these forms to be successfully transferred from the POS and subsequently transformed and populated by OceanMD, the operational Patient "$everything" operation call from Ocean must be supported. This ideally includes all the information related to one patient, across the entire system. It is strongly recommended that POS vendors implement this where possible.

The $everything operation allows Ocean to read the following patient information for the sake of pre-populating Ocean forms:

- Medications
- Allergies
- Problem list
- Past Medical History
- Family History
- Chart Attachments (pre-selected)
- Observations/Vitals/Lab Values
- Immunizations

Ocean will process the following FHIR resources when they are included in the $everything bundle:

- MedicationStatement
- AllergyIntolerance
- Conditions (for vitals and lab values)
- Appointment
- Observation
- DocumentReference (for pre-selected chart attachments)
- Immunization
- Please refer to this guide for additional information.

In order to enable the population of these forms to be successfully transferred from the EMR and subsequently transformed and populated by OceanMD, the operational Patient "$everything" operation call from Ocean must be supported. This ideally includes all the information related to one patient, across the entire system. It is strongly recommended that EMR vendors implement this where possible.

The $everything operation allows Ocean to read the following patient information for the sake of pre-populating Ocean forms:

- Medications
- Allergies
- Problem list
- Past Medical History
- Family History
- Chart Attachments (pre-selected)
- Observations/Vitals/Lab Values
- Immunizations

Ocean will process the following FHIR resources when they are included in the $everything bundle:

- MedicationStatement
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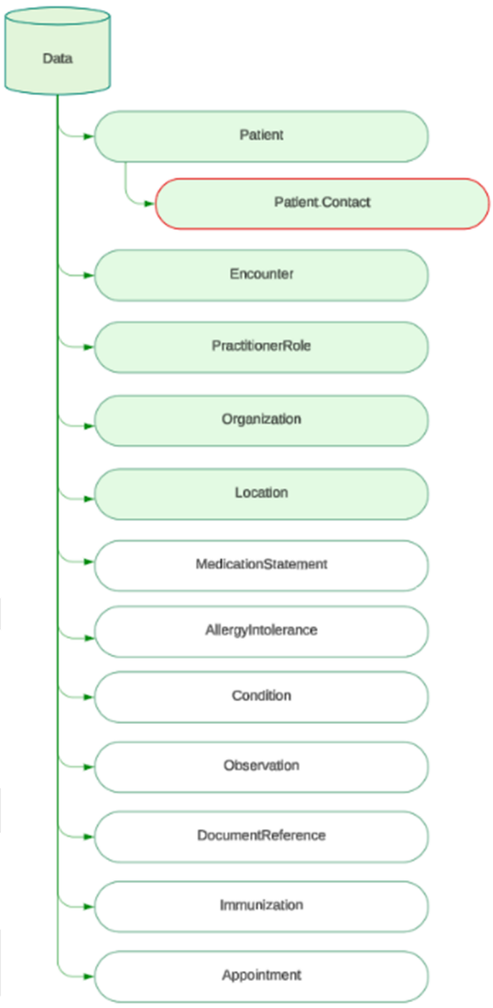
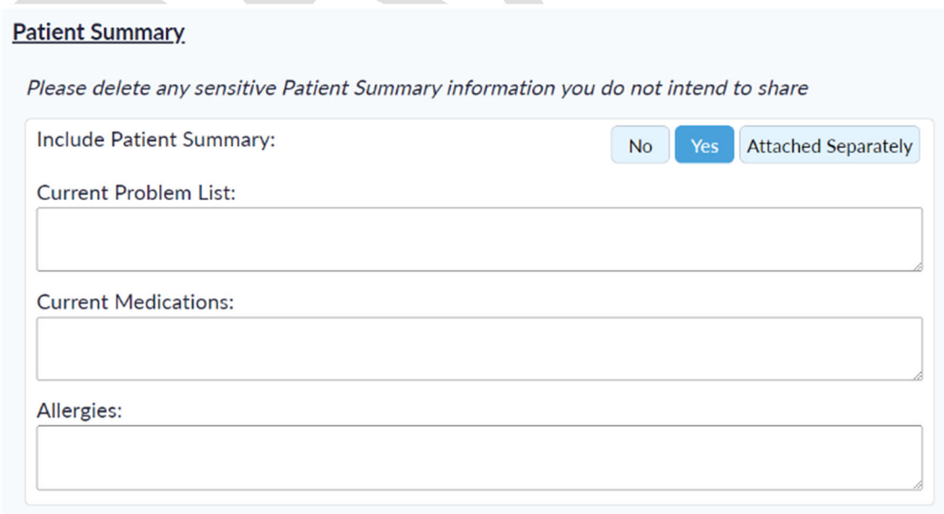
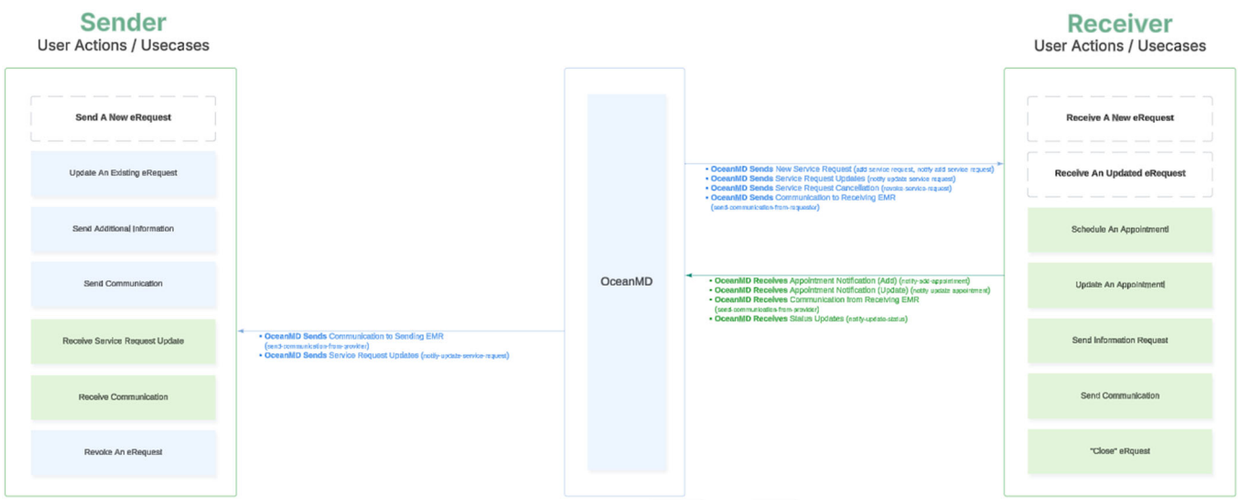




Example from the BC Provincial eReferral Form

Supported Message Exchanges



Statuses

Using the Release Information Worksheet Include this map in the Release Information to indicate the supported Task Statuses and how they map to the Location in your POS.

A Sample is provided here:

To Move a Referral into This Folder in the Ocean Portal	Send the Following Value in the Task.Status	Notes	EMR Location	EMR Location Configurable
PENDING BOOKING	ACCEPTED	Ocean stores referrals in any of these statuses in the Pending Booking folder.	*e.g. Pending Referrals*	*Yes/No*
	IN PROGRESS		*e.g. Under Review*	*Yes/No*
	ON HOLD		*e.g. On Hold*	*Yes/No*
	READY		*e.g. Ready for Booking*	*Yes/No*
BOOKING UNCONFIRMED	*not applicable - see Notes*	When Ocean receives an Appointment resource with a valid date, it will automatically convert to "Booking Unconfirmed".	*e.g. Unconfirmed Bookings*	*Yes/No*
BOOKING CONFIRMED	*not applicable - see Notes*	A referral moves into this folder if the patient confirms via email from Ocean; cannot be updated by a downstream system.	*e.g. Confirmed Bookings*	*Yes/No*
AWAITING REPLY	*not applicable - see Notes*	Moves into this folder if a send-communication message event is sent by the downstream system.	*e.g. Awaiting Patient Response*	*Yes/No*
DECLINED	REJECTED	If a referral status is changed to one of these, the referral cannot be updated afterward.	*e.g. Declined Referrals*	*Yes/No*
CANCELLED	CANCELLED		*e.g. Cancelled Appointments*	*Yes/No*
COMPLETED	COMPLETED		*e.g. Completed Referrals*	*Yes/No*
	FAILED		*e.g. Failed Referrals*	*Yes/No*

Unsupported Ocean Features

The following Ocean Features are currently **not supported** as a "Sending POS" or "Receving POS"

Feature	Workarounds
"Save As Draft"	• Manual workaround to login to OceanMD Portal to access Drafts in "Incomplete" Folder 
"Export to Ocean"	• Manual workaround to login to OceanMD Portal to access Drafts in "Incomplete" Folder
"Export to POS"	• Not required once FHIR integrated

Additional Resources and References

- Ontario eReferral iGuide – SMART on FHIR Specifications
- OceanMD SMART on FHIR Implementation Guidance
- OceanMD SMART App Launch Overview
- OceanMD HL7 FHIR Implementation Guidance
- OceanMD FHIR API
- Ontario v11 Implementation Guide
- Ocean SMART on FHIR Profiles: Ocean SMART on FHIR Profiles - SIMPLIFIER.NET
- Smart Health IT: SMART on FHIR -- Tutorials -- Server Quick-start
- Using Keywords to Automatically Insert Content (Tentatively confirming FHIR supported keywords)
- Sample Ocean to EMR Data and Keyword Mapping Templates [Accuro, Med Access, OSCAR PRO]

Release and Evaluation

Demo

Demo Day is your chance to show the Program team how your EMR works. Use the agenda template to plan your presentation. Highlight key workflows and features, and adjust it to fit your setup.

Agenda	Topics Covered	Timeframe
Introductions	Round Table Introductions • EMR Team • DRO Teams	5 Minutes
Overview	Discuss Project scope and current milestones Discuss supported features and release information • Basic Features • Additional Features • Gaps and Omissions	10 Minutes
Experiences	Display and discuss: Approach Issues Faced Known Issues, Bugs or Workarounds (in EMR, in Ocean)	5 Minutes

Demo	Demonstrate: 1. Introduction to the EMR (Deployment Model, Plugins and Orientation of Key areas of the EMR UI) 2. Demonstrate User Login to Sending EMR Instance 3. Navigate to Test Patient, Describe usecase 4. The button used to Launch into Ocean from Patient profile or Menu 5. Search and Navigation to an EMR Listing using a BC Provincial Form 6. Demonstrate the Test Patient data display in the Header and Form 7. Demonstrate the Test Provider data display in the Footer 8. Complete the Referral and Send 9. Navigate to the Receiving EMR 10. Display the Received Information in the receiving EMR instance 11. Display any notifications to the Patient or Sending EMR instance 12. Navigate to Ocean *Sending Site's* Referral Dashboard, display the Inbox showing the Sent Referral a. Navigate to the Ocean Referral Page, Display the Sent Referral b. Display the Event Log 13. Navigate to the Receiving instance and Update the Referral (e.g. by accepting and setting an Appointment) 14. Navigate to Ocean *Sending Site's* Referral Dashboard, display the Inbox showing the Updated Referral a. Navigate to the Ocean Referral Page, Display the Sent Referral b. Display any appointment information c. Display the Event Log	35 Minutes
Questions	Questions and Open Discussion	15 Minutes
Marketing	Marketing plan and User Engagement	5 Minutes
Release and End-User Support	• Walkthrough Prototype Deployment Package o Discuss Test Instances available and Release Notes • Discuss End-User Configuration Process • Discuss Go-Live Plans	5 Mi

Release

Using the DRO Integration Worksheet, provide technical configurations, test case results, and production readiness details using the Excel worksheet. Ensure all required release information, such as supported browsers, deployment models, and version numbers, is complete and accurate. Also prepare and supply a training schedule for the new integration and features. This ensures the Program team can evaluate your system for approval.

The Program team will review the details provided in your Excel worksheet. This includes your test case results, FHIR configurations, and production readiness. They will evaluate your system's features, integration setup, and support model. A demo of your system is also required to showcase key workflows and readiness. Approval is needed to move to onboarding.

Additional Resources and References

- **Fill in and return** the DRO Integration Resource – Release Information Worksheet

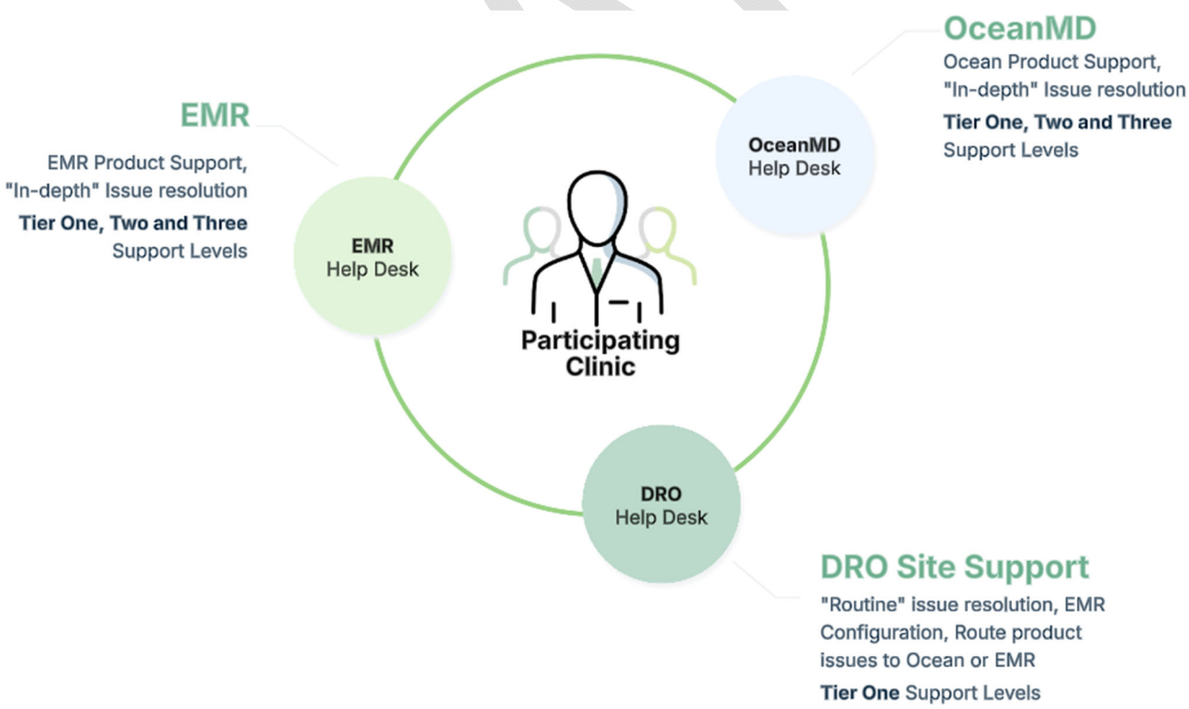
Onboarding

Support Model

DRO Site Support is a key feature of the Program, providing end users from Participating Clinics with hands-on technical support. Typically acting as the first point of contact, our Site Support Help Desk handles routine or basic issues, ensuring that common challenges are resolved quickly and efficiently. Complex cases are routed to Tier 2 support, which involves either the OceanMD Help Desk or your EMR Help Desk, depending on the issue.

This 'hybrid' support model ensures smooth collaboration between Site Support, the OceanMD Help Desk, and your EMR Help Desk. This approach provides end users with a seamless support experience, from resolving routine issues to addressing more complex challenges.
Using the provided Knowledgebase articles you provide in your Release Package, Site Support can also route Users to the available articles, troubleshooting guides, and ticket submission process (for instance, during initial EMR configuration)
DHI Support is available Monday to Friday (excluding mandatory holidays) from 8AM to 5PM PST, our toll free Support Number and Support Email are as follows:

- Phone:1-833-297-8107
- Email: DHSupport@phsa.ca



Hybrid Model In Action:

Scenario 1: Site Support Resolves the Issue

Issue: A clinic user reports difficulty accessing the OceanMD integration dashboard

- **Action:** The user submits a ticket through the Support Site
- **Resolution:** Site Support identifies that the user's login account was not granted the correct permissions within OceanMD Web Portal and the EMR. They provide step-by-step instructions to the clinic administrator to adjust the permissions
- **Outcome:** The issue is resolved at the Site Support level without requiring escalation

Scenario 2: Issue Escalated to OceanMD or EMR

Issue: A clinic reports that appointment data is not syncing correctly between the EMR and the OceanMD system

- **Action:** The user contacts Site Support, who conducts an initial review. They confirm that the issue is not related to basic settings or permissions
- **Escalation:** Site Support escalates the ticket to OceanMD Help Desk. The OceanMD Help Desk engages their Tier 2 to investigate the API integration, and the EMR Help Desk is involved as well to confirm configuration settings and API interoperability capabilities
- **Resolution**: The combined efforts of OceanMD and the EMR Technical teams identify and resolve a misconfiguration in the integration settings, restoring proper appointment syncing
- **Outcome:** Collaboration between OceanMD and the EMR teams resolves the issue, ensuring accurate appointment syncing

Scenario 3: User is Routed to Site Support

Issue: A clinic contacts the OceanMD Help Desk to request information about the Program's onboarding process for new users

- **Action:** The OceanMD Help Desk identifies that this request pertains to Program-specific details rather than a technical issue with the OceanMD product
- **Routing:** The Help Desk informs the user that Site Support handles Program-related inquiries and directs them to contact their assigned Site Support representative through the Support Site
- **Resolution:** Site Support provides the clinic with detailed onboarding information, including timelines, required steps, and resources available through the Program
- **Outcome:** The user receives the necessary Program details and further program Onboarding support

Additional Resources and References

- What Is an Ocean Site Support?
- PHSA DHI Support Services Overview