

Use Cases

eReferral eConsult Development

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The purpose is to describe the use cases and workflow scenarios for managing eReferrals and eConsults across solutions. Each jurisdiction may have implementation variances within the use cases. Therefore, these use cases provide examples and are not meant to be inclusive of all possible implementation choices and do not represent required implementation choices. The use cases provide high-level interactions between the Health Care Providers, their Health Records System and other Health Records Systems. Use cases provide the business description or "conversation" between the system(s) and its user(s), known as Participants. Participants can be people (e.g., health care providers, patients, etc.) or systems (e.g., EMR, Referral Management System, etc.). Please note that detailed interactions are defined in the pan-Canadian eReferral/eConsult - Companion Guide to Reference Architecture.

Each use case will include:

- use case scenario,
- examples of use case triggers, pre and post conditions,
- who the participants are (i.e., people and systems),
- a use case diagram to provide a visual representation of the interactions between participants,
- use case steps corresponding to the diagram and potential alternate flows; and
- reference to the corresponding business requirements.

1 Use Case Index

This section includes a proposed list of use cases which were identified as being priority use cases in the pan-Canadian environmental scan. Subsequently, through collaboration with the participating Canadian jurisdictions, the use case scope will be further refined into priorities for the initial releases and those which will be included in future releases.

The scope for this release of the pan-Canadian eReferral / eConsult – Interoperability Specifications has not been defined yet.

The list below includes the use cases' ID, name and description as a potential proposed scope. Following each use case is a list of the Canadian jurisdictions that have identified the use case as being applicable to their implementation for Release 1 or beyond.

Use Case ID	Use Case Name	Use Case Description	Identified by Jurisdictions:
UC-01	Referral for a service	Requester Health Care Provider sends a referral request to a Performer Health Care Provider	
UC-02	Referral for a service with a booked appointment	Requester Health Care Provider sends a referral request to a Performer Health Care Provider and books the appointment	
UC-03	Consultation Request	Requester Health Care Provider sends a consult request to a Performer Health Care Provider	
UC-04	Convert Referral to Consultation	Performer Health Care Provider converts the referral request to a consult	
UC-05	Referral to Home and Community Care with Care Coordinator	Requester Health Care Provider sends a referral request to a Performer Health Care Provider, Performer Health Care Provider completes assessment and sends referral request to another downstream Performer Health Care Provider	
UC-06	Referral to Central Intake	Requester Health Care Provider sends a referral request to a Central Intake, which forwards to most appropriate downstream Performer Health Care Provider	

Exercise

What is the relative priority for each of these Use Cases in your Jurisdiction?

Please rank the use cases in order from Highest Priority to lowest priority, (e.g. UC-01 > UC-03 > UC-04...)

2 UC-01: Referral to a Service

Description

Requester Health Care Provider sends a referral request to a Performer Health Care Provider

Scenario

Jane Doe is an independent senior who lives alone. She has had a recent injury that resulted in an ER visit, and has a follow-up appointment with her family doctor, Dr. Jones who notices her appearance is not as crisp as usual. Jane admits she is struggling with keeping up with laundry and other chores due to her injury and Dr. Jones believes she would benefit from some housekeeping services. He is a busy physician with one secretary who is kept busy answering the phone most of the day. He wants to quickly search “housekeeping”, pick a community service close to Jane and send a referral. Dr. Jones knows from previous experience that this referral will not get lost like a fax, and he can expect an update on the request via an EMR notification and within the patient record.

Dr. Jones initiates a search for the service from his EMR, which is integrated with a Referral Management System (i.e. RMS Source). After selecting a housekeeping service appropriate to Jane, he is presented with a form with some of the information already automatically filled in with data from his EMR. He completes the form and clicks Submit to send the referral request details the Service Provider’s Referral Management System (i.e. RMS Target), and an email to Jane confirming that the referral has been requested.

The RMS Target notifies April, the Service Provider representative, of the incoming request who contacts Jane using her preferred method of communication and arranges the appropriate services. The RMS Target also updates Dr. Jones’ RMS Source, which in turn updates Dr. Jones’ EMR that Jane has had services set-up, and with their on-going status.

Triggers, Pre-conditions, Post-conditions

Triggers

Patient visit with a Requester Health Care Provider (HCP) that results in a referral

Pre-conditions

- Integration between Requester POS, RMS and a Health Services Directory
- In jurisdictions where explicit consent is required to send the referral (including PHI):
 - Patient provides, or has previously provided, consent to share their PHI with Performer HCP
- Patient has provided consent to being notified about referral and appointment status through their email
- Service directory validates that available services are valid and up-to-date
- Patient demographic information in Requester POS system is valid and up-to-date

Post-conditions

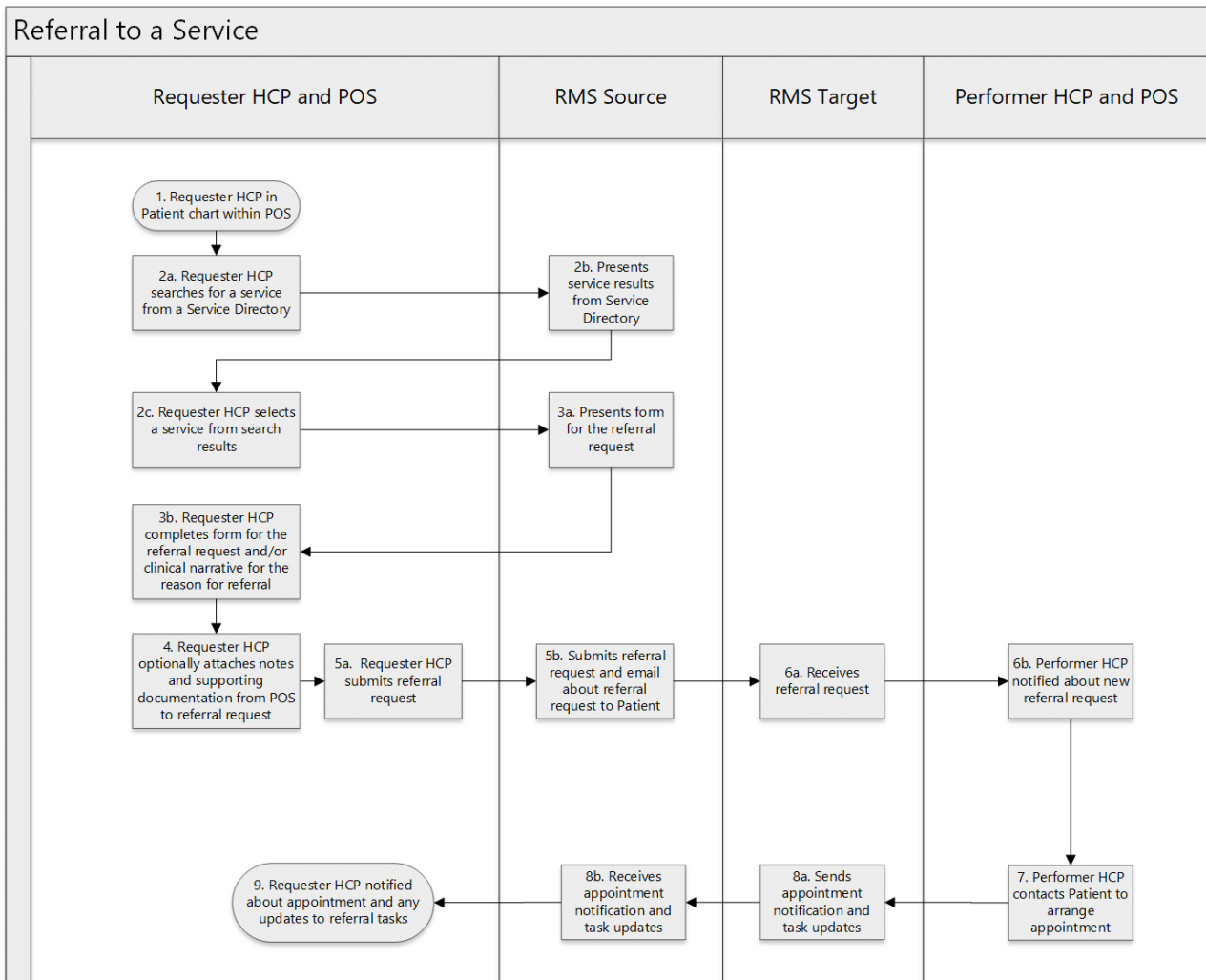
- The Performer HCP sets up and updates tasks for the service request, and Requester HCP is updated on the on-going status . Or,

- The service request was not fulfilled or was ended before completion because:
 - The Requester HCP cancels the referral request and a notification is sent to Performer HCP
 - The Performer HCP declines the referral request and a notification is sent to Requester HCP
 - The Patient declines the referral request

Use Case Participants and Workflow diagram

- **Requester HCP:** A Health Care Provider, medical office assistant or service provider that initiates the eReferral workflow for a patient by sending a referral request
- **Performer HCP:** A Health Care Provider, medical office assistant or service provider that receives the referral request and performs the requested services
- **Point of Service Systems (POS):** Used by Requester/Performer HCPs to view and manage personal health information (PHI). These systems include hospital information systems (HIS), primary care electronic medical record systems (EMR), community and ambulatory health information systems, and provincial/regional EHR viewers.
 - Requester POS systems initiate and potentially track and manage healthcare referral/consult requests.
 - Performer POS receives the referral/consult request and is used to provide the requested healthcare services
- **Referral Management Systems (RMS):** Support the exchange of referral requests between Requester HCP and Performer HCP where one or both of their POS systems do not have the required capabilities to support the workflow (if POS systems do have the required capabilities to support the referral request workflow, they are considered both a POS and an RMS)
 - RMS Source: Used by Requester HCP to initiate, monitor and communicate about the referral request.
 - RMS Target: Used by Performer HCP to receive, respond to, manage and communicate about the referral request and associated tasks
- **Health Service Directory (HSD):** Used by HCP or service provider to discover services and service providers to address patient referral needs. RMS typically bundle in HSD functionality to better support referral workflows

This use case diagram represents the participants and their role in the use case with a high-level view of the flow of information.



Use Case - Primary Flow

The following provides a textual description corresponding to the use case diagram.

1. Requester HCP starts in the patient record in the POS system and launches the integrated RMS with Service Directory.
2. Requester HCP searches and selects an appropriate service from a Service Directory.
3. Requester HCP is presented with and completes the appropriate referral form, and/or fills in a free-text clinical narrative to support the reason for the referral. Some of the data is already filled in from the integrated POS system.
4. Requester HCP may optionally attach additional clinical notes and supporting documentation from the POS system to support the referral request.
5. Requester HCP submits the referral request (clinical documentation and/or referral form), RMS Source submits an email to the Patient about the sent referral request.
6. RMS Target receives the referral request and notifies Performer HCP.
7. Performer HCP contacts the patient to arrange an appointment.

8. RMS Target sends appointment notification and task updates to RMS Source.
9. Requester HCP is notified through their POS and RMS Source of the date/time/location of the first patient encounter with Performer HCP and any changes to the referral request and associated tasks.

Use Case - Alternate Flows

The following list provides possible alternate flows that may occur within this use case.

1. Requester HCP may revoke the referral request, this status is noted in their RMS Source and automatically forwarded to Performer RMS and POS. (Step 6 – 9)
2. Performer HCP may be unable to provide the service, this status is noted in their RMS Target and automatically forwarded to Requester RMS and POS. (Step 6 – 9)
3. Patient may decline the service and the status is notified in the Requester RMS and POS. (Step 1 – 9)
4. Patient may change the appointment date. (Step 7 – 9)

3 UC-02: Referral to a Service with a booked appointment

Description

Requester Health Care Provider sends a referral request to a Performer Health Care Provider, and books the appointment

Scenario

Scenario

John Doe is a complex senior patient who lives alone. He has a Nurse Practitioner(NP) who is working very closely with him with both medical and social issues. John could use some exercise, but really the NP wants to give him a reason to leave his home and socialize. She suggests Gentle Exercise classes, and he begrudgingly agrees.

The NP knows that if left up to him, he will not pursue this further, so she wants to send him home with a day, time and location for at least one class. She is confident that the referral recipient will get all the information they need, pulled from her EMR, and together they find a location, date and time that will work for him. The NP is willing and able to sign him up for his class and complete all the necessary details in the sign-up form.

Afterwards she prints off what he needs to take home, and also knows that an email will be waiting for him when he gets home. She is happy that she does not need to duplicate the information from the referral in his patient record as this has automatically updated for her in her EMR.

The community service provider is notified that John has signed up for this specific class and is able to take appropriate action.

Triggers, Pre-conditions, Post-conditions

Triggers

Patient visit with a Requester Health Care Provider (HCP) that results in a referral

Pre-conditions

- Integration between Requester POS, RMS and a Health Services Directory
- In jurisdictions where explicit consent is required to send the referral (including PHI):
 - Patient provides, or has previously provided, consent to share their PHI with Performer HCP
- Patient has provided consent to being notified about referral and appointment status through their email
- RMS target provides up-to-date scheduling information for available services
- Service directory validates that available services are valid and up-to-date
- Patient demographic information in Requester POS system is valid and up-to-date

Post-conditions

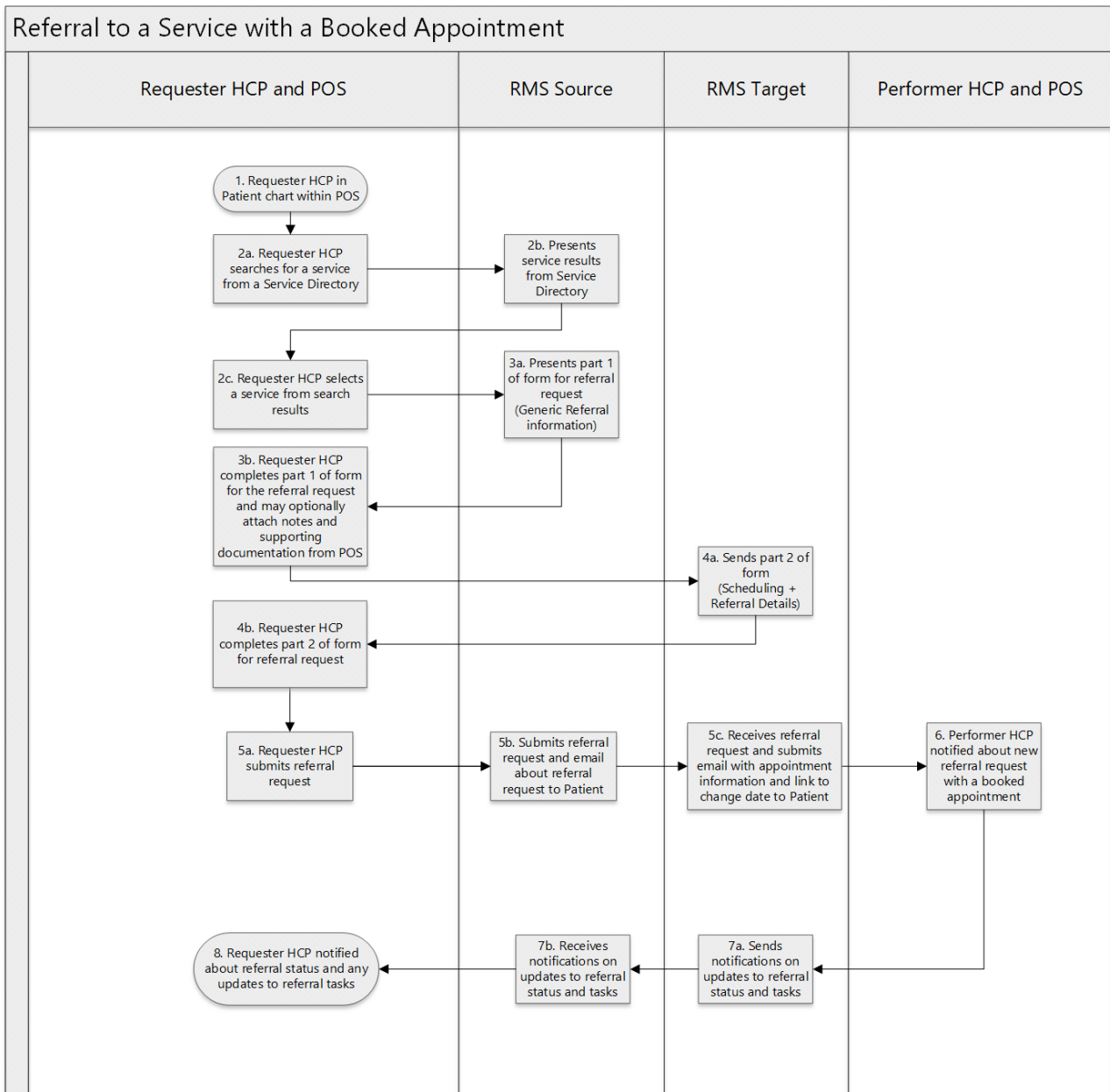
- The Performer HCP sets up and updates tasks for the service request, and Requester HCP is updated on the on-going status . Or,

- The service request was not fulfilled or was ended before completion because:
 - The Requester HCP cancels the referral request and a notification is sent to Performer HCP
 - The Performer HCP declines the referral request and a notification is sent to Requester HCP
 - The Patient declines the referral request

Use Case Participants and Workflow diagram

- **Requester HCP:** A Health Care Provider, medical office assistant or service provider that initiates the eReferral workflow for a patient by sending a referral request
- **Performer HCP:** A Health Care Provider, medical office assistant or service provider that receives the referral request and performs the requested services
- **Point of Service Systems (POS):** Used by Requester/Performer HCPs to view and manage personal health information (PHI). These systems include hospital information systems (HIS), primary care electronic medical record systems (EMR), community and ambulatory health information systems, and provincial/regional EHR viewers.
 - Requester POS systems initiate and potentially track and manage healthcare referral/consult requests.
 - Performer POS receives the referral/consult request and is used to provide the requested healthcare services
- **Referral Management Systems (RMS):** Support the exchange of referral requests between Requester HCP and Performer HCP where one or both of their POS systems do not have the required capabilities to support the workflow (if POS systems do have the required capabilities to support the referral request workflow, they are considered both a POS and an RMS)
 - RMS Source: Used by Requester HCP to initiate, monitor and communicate about the referral request.
 - RMS Target: Used by Performer HCP to receive, respond to, manage and communicate about the referral request and associated tasks
- **Health Service Directory (HSD):** Used by HCP or service provider to discover services and service providers to address patient referral needs. RMS typically bundle in HSD functionality to better support referral workflows

This use case diagram represents the participants and their role in the use case with a high-level view of the flow of information.



Use Case - Primary Flow

The following provides a textual description corresponding to the use case diagram.

1. Requester HCP starts in the patient record in the POS system and launches the integrated RMS with Service Directory.
2. Requester HCP searches and selects an appropriate service from a Service Directory integrated with their POS and RMS systems.

3. Requester HCP is presented with a 2 part form. Part 1 of the form is based on the service details from the service directory. Some of the data is already filled in from the integrated POS system and the Requester HCP completes and fills Part 1, and may optionally attach additional clinical notes and supporting documentation from POS.
4. RMS Target immediately provides Part 2 of the form for the Requester HCP to complete. Part 2 contains real-time information from the Performer HCP, such as available appointment slots, clinical decision support information and additional data requirements that may not be included in the generic Part 1. Requester HCP completes Part 2 of the form.
5. Requester HCP submits the referral request, RMS Source submits an email to the Patient about the sent referral request, and RMS Target receives the referral request and provides the Patient with the appointment information and a link to change the date through a notification.
6. Performer HCP is notified about the incoming referral request and that the patient has already booked the first appointment.
7. RMS Target sends appointment notification and task updates to RMS Source.
8. Requester HCP is notified through their POS and RMS about any status changes to the referral request and associated tasks

Use Case - Alternate Flows

The following list provides possible alternate flows that may occur within this use case.

1. Requester HCP may revoke the referral request, this status is noted in their RMS Source and automatically forwarded to Performer RMS and POS. (Step 5 – 8)
2. Performer HCP may be unable to provide the service, this status is noted in Part 2 of the form, their RMS Target and automatically forwarded to Requester RMS and POS. (Step 4, Step 6 – 8)
3. Patient may decline the service and the status is notified in the Requester RMS and POS. (Step 1 – 8)
4. Patient may change the appointment date. (Step 5 – 8)

4 UC-03: Consultation Request

Description

Requester Health Care Provider sends a consult request to a Performer Health Care Provider

Scenario

Jane Doe visits her family doctor complaining about pain occurring in her back and lower abdomen for the past two days. The family physician assessment notes right-sided flank pain radiating from the back to the lower abdomen, with fluctuating intensity that has not resulted in fever, nausea or vomiting. The patient has not had any recent trauma, numbness or weakness in extremities, and no saddle anesthesia. Suspecting renal colic, Jane's doctor sends her for an ultrasound. The ultrasound confirms a non-obstructing 5mm stone in the right ureter but also find an incidental complex renal cyst. Jane's family physician decides to consult a urologist to ask if the cyst can be managed with serial imaging, or whether a referral and consideration of a biopsy is necessary.

Variation 1 - Request to Managed specialty (direct from RMS Source)

Jane's family physician creates the eConsult request, searches for the specialty - Urology, and then submits an eConsult case. The case is received by the Case Assigner at the managed specialty who assigns the case to a Urologist.

Variation 2 - Case submitted to Specific Provider

Jane's family physician knows a Urologist whom they wish to submit the consult request to directly. The family physician creates the eConsult request, searches for the specific provider, and then submits an eConsult case.

Variation 3 - Managed Group

Jane's family physician know which organization to submit the consult request to but will leave it to the case assigner at the organization to select the specialist. The family physician creates the eConsult request, searches for an organization, and submits the case to the organization. The case is received by the Case Assigner at the organization who assigns the case to a Urologist.

After Case Assignment

The Urologist receives a notification for the assigned case, logs into their POS integrated with Referral Management System (RMS Target), reviews the case details and sends a response back to Jane's family physician indicating that the size of the cyst and characteristics reported on the ultrasound can be safely monitored. A repeat Ultrasound is recommended within 6 months. Upon returning the consult, the Urologist is prompted to fill out a brief survey indicating time spent on the case amongst other questions. Jane's family physician receives the consult result, reviews the notes left by the Urologist, is satisfied with the response and no further clarification is necessary at this time. The family physician closes the case from their POS integrated with Referral Management System. Upon closing the case, the family physician is prompted to fill out a brief survey.

Triggers, Pre-conditions, Post-conditions

Triggers

Patient visit with a Requester Health Care Provider (HCP) that results in a consultation request.

Pre-conditions

- Integration between Requester POS, RMS and a Health Services Directory.
- In jurisdictions where explicit consent is required to send the referral (including PHI):
 - Patient provides, or has previously provided, consent to share their PHI with Performer HCP.
- Service directory validates that available services are valid and up-to-date.
- Patient demographic information in Requester POS system is valid and up-to-date.

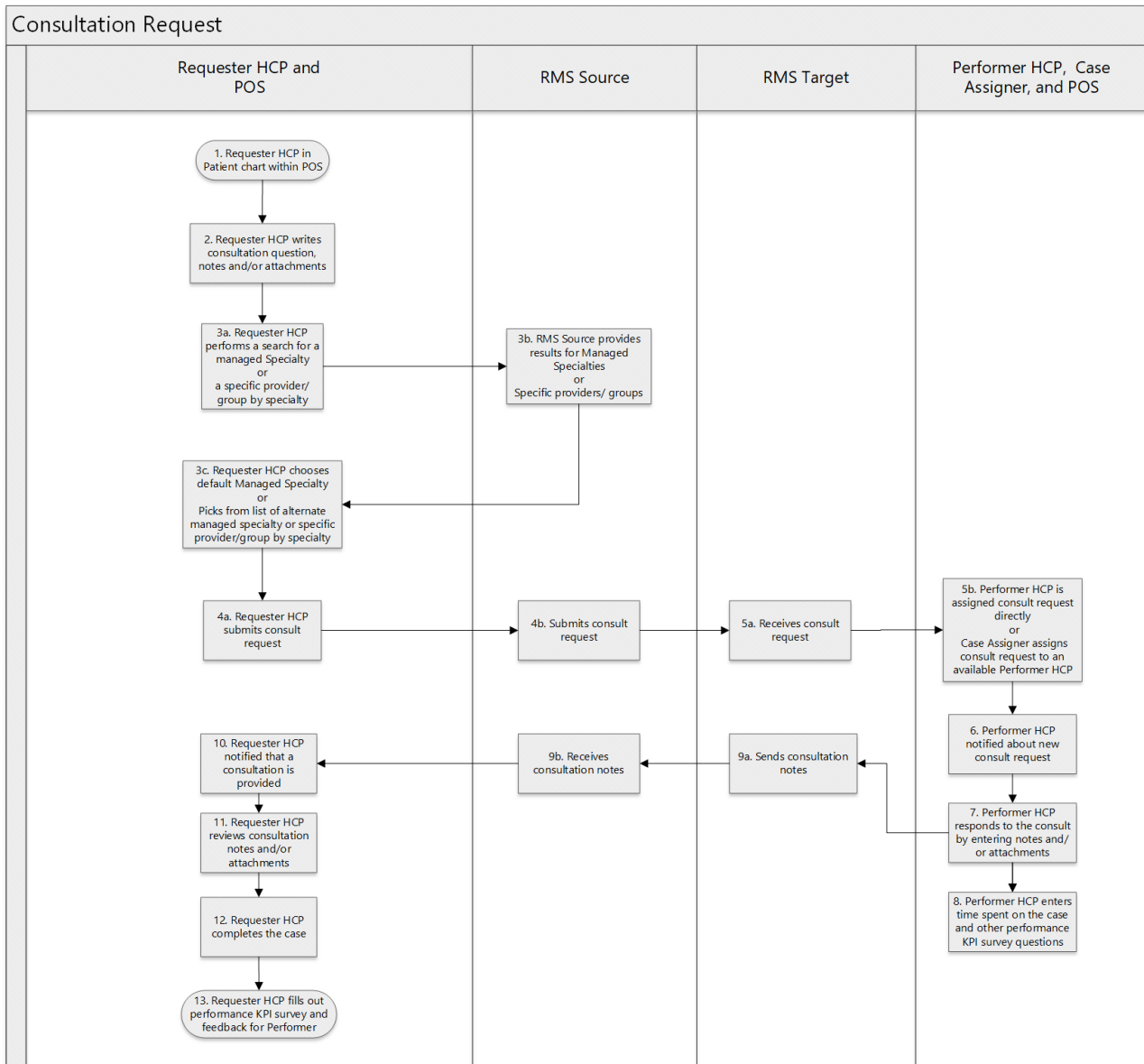
Post-conditions

- The Requester HCP has closed the consult request after reviewing the consultation notes and/or attachments from the Performer. Both Requester HCP and Performer HCP have answered a survey based on the consult. Or,
- The Requester HCP initiates an eReferral because the Performer wishes to see the patient in the consult. Or,
- The Requester HCP cancels the consult request. Or,
- The Requester HCP redirects the consult request to another Managed Specialty, specific provider or group.

Use Case Participants and Workflow diagram

- **Requester HCP:** A Health Care Provider, medical office assistant or service provider that initiates the eReferral workflow for a patient by sending a referral request.
- **Performer HCP:** A Health Care Provider, medical office assistant or service provider that receives the referral request and performs the requested services.
- **Point of Service Systems (POS):** Used by Requester/Performer HCPs to view and manage personal health information (PHI). These systems include hospital information systems (HIS), primary care electronic medical record systems (EMR), community and ambulatory health information systems, and provincial/regional EHR viewers.
 - Requester POS systems initiate and potentially track and manage healthcare referral/consult requests.
 - Performer POS receives the referral/consult request and is used to provide the requested healthcare services.
- **Referral Management Systems (RMS):** Support the exchange of referral requests between Requester HCP and Performer HCP where one or both of their POS systems do not have the required capabilities to support the workflow (if POS systems do have the required capabilities to support the referral request workflow, they are considered both a POS and an RMS).
 - **RMS Source:** Used by Requester HCP to initiate, monitor and communicate about the referral request.
 - **RMS Target:** Used by Performer HCP to receive, respond to, manage and communicate about the referral request and associated tasks.
- **Health Service Directory (HSD):** Used by HCP or service provider to discover services and service providers to address patient referral needs. RMS typically bundle in HSD functionality to better support referral workflows.
- **Case Assigner:** A person at a managed specialty/provider group that assigns incoming referral/consult requests to a performer HCPs. May also be an algorithm (system) that automatically assigns requests to an available performer HCP based on wait time, availability and location.

This use case diagram represents the participants and their role in the use case with a high-level view of the flow of information.



Use Case - Primary Flow

The following provides a textual description corresponding to the use case diagram.

1. Requester HCP starts in the patient record in the POS system and launches the integrated RMS with Service Directory.
2. Requester HCP writes consultation question, attaches images and notes.
3. Requester HCP searches and selects a Managed Specialty or Specific provider/group from the Service Directory.

4. Requester HCP submits consult request.
5. Case Assigner receives the consult request through RMS Target and assigns to a Performer HCP (Managed Specialty/ Specific group model), or case is assigned directly to a Performer HCP by RMS Target (Specific provider model).
6. Performer receives a notification in their POS on the arrival of the new consult request.
7. Performer accesses the consult request through the RMS, or their POS which is integrated with the RMS, and responds to the consult request by entering in notes and/or attachments.
8. Performer HCP is prompted to enter in time spent on the case and answer other performance KPI survey questions.
9. Performer HCP sends the consultation notes back to the Requester HCP.
10. Requester HCP receives a notification in their POS indicating that a consult has been provided.
11. Requester HCP reviews the consultation response using their POS and RMS.
12. Requester HCP is satisfied with the information, and completes the case.
13. Requester HCP is prompted to answer a performance KPI survey and provide feedback to Performer.

Use Case - Alternate Flows

The following list provides possible alternate flows that may occur within this use case.

1. Clarification Requested: After a consult has been provided, if further information is needed, the Requester HCP has the ability to request clarification from the Performer HCP. (Step 11)
2. Request for Information
 - a. More Information Requested: Performer HCP requests for more information from the Requester HCP. (Step 7)
 - b. More Information Provided: Requester HCP provides the information asked by the Performer HCP.
3. Case Cancelled: The Requester HCP can decide to cancel the consult request if the consult is no longer needed. (Step 5 - 7)
4. Case Redirect by Assigner: The Case Assigner at the specialty can redirect the consult request to another Performer HCP, which does not close the original consult request, but simply redirects it to another target. (Step 6)
5. Case Redirect by Requester: The Requester can redirect the consult request to another Managed Specialty, specific provider or group. This closes the original consult request and creates a new request for the recipient. (Step 5 - 7)
6. Return Case: The case is returned by the Performer HCP to the Case Assigner to be assigned to another specialist. (Step 6)
7. Return Case and convert to eReferral: The Performer HCP provides the consult and selects the option to indicate they wish to see the patient. The Requester HCP completes the consult and initiates an eReferral. (Step 7)

5 UC-04: Convert a Referral to a Consultation

Description

Performer Health Care Provider converts the referral request to a consult

Scenario

John Doe visits his family physician to report chest pain occurring over the weekend. John is a smoker, with high blood pressure and high cholesterol. After a thorough assessment, the family doctor is sure that the chest pain is not cardiac in origin, but would still like a Cardiology opinion and work up due to the risk factors in John's past medical history. The doctor proceeds to create an eReferral to a Cardiologist. The Cardiologist responds to the referral request by providing an eConsult message / note, providing advice to the family physician on appropriate next steps in diagnostic testing.

Triggers, Pre-conditions, Post-conditions

Triggers

Patient visit with a Requester Health Care Provider (HCP) that results in a referral.

Pre-conditions

- Integration between Requester POS, RMS and a Health Services Directory.
- In jurisdictions where explicit consent is required to send the referral (including PHI):
 - Patient provides, or has previously provided, consent to share their PHI with Performer HCP.
- Patient has provided consent to be notified about referral and appointment status through their email.
- Service directory validates that available services are valid and up-to-date.
- Patient demographic information in Requester POS system is valid and up-to-date.

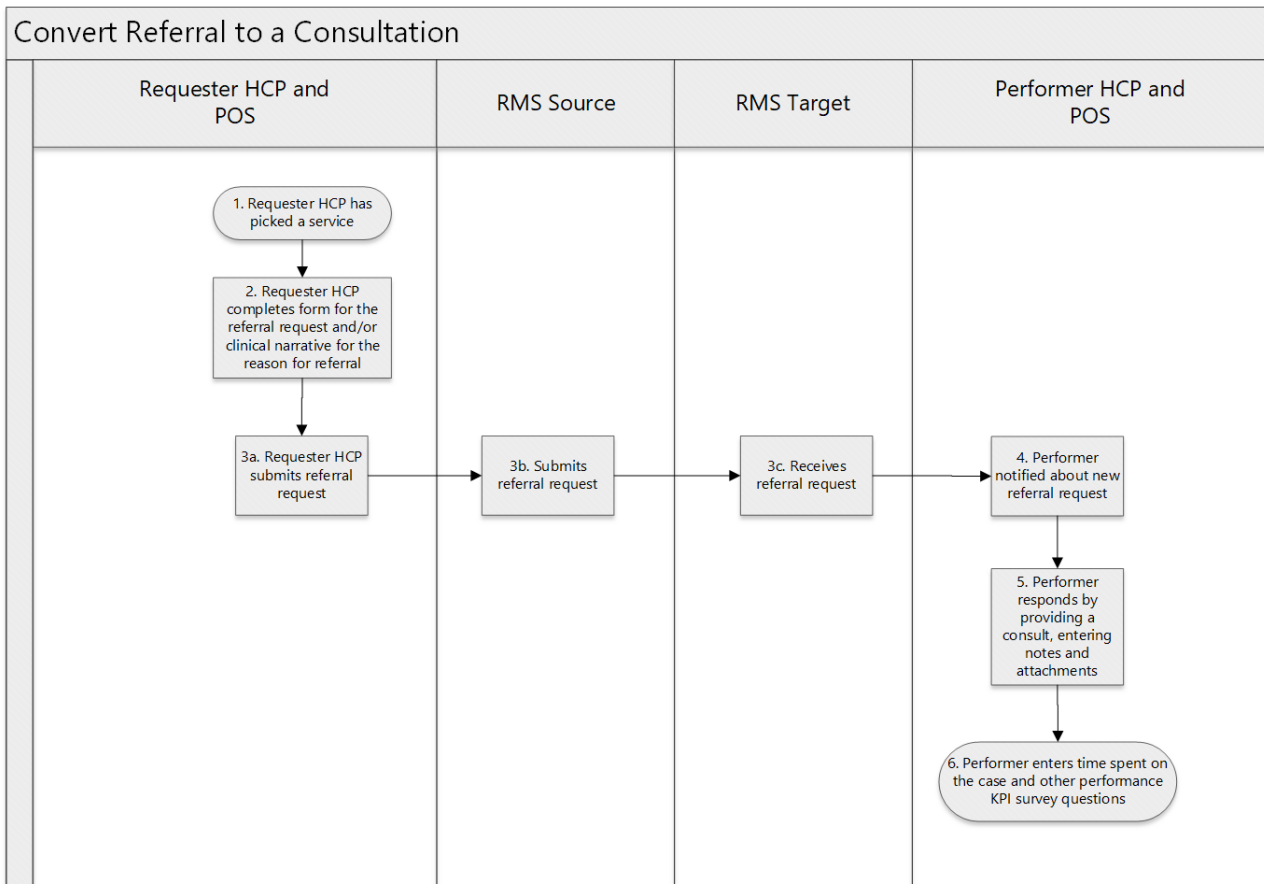
Post-conditions

- The Requester HCP has closed the consult request after reviewing the consultation notes and/or attachments from the Performer. Both Requester HCP and Performer HCP have answered a survey based on the consult. Or,
- The Requester HCP redirects the consult request to another Managed Specialty, specific provider or group. Or,
- The Requester HCP cancels the consult request. Or,
- The Requester HCP cancels the referral request and a notification is sent to Performer HCP. Or,
- The Performer HCP declines the referral request and a notification is sent to Requester HCP. Or,
- The Patient declines the original referral request.

Use Case Participants and Workflow diagram

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- **Requester HCP:** A Health Care Provider, medical office assistant or service provider that initiates the eReferral workflow for a patient by sending a referral request.
 - **Performer HCP:** A Health Care Provider, medical office assistant or service provider that receives the referral request and performs the requested services.
 - **Point of Service Systems (POS):** Used by Requester/Performer HCPs to view and manage personal health information (PHI). These systems include hospital information systems (HIS), primary care electronic medical record systems (EMR), community and ambulatory health information systems, and provincial/regional EHR viewers.
 - Requester POS systems initiate and potentially track and manage healthcare referral/consult requests.
 - Performer POS receives the referral/consult request and is used to provide the requested healthcare services.
 - **Referral Management Systems (RMS):** Support the exchange of referral requests between Requester HCP and Performer HCP where one or both of their POS systems do not have the required capabilities to support the workflow (if POS systems do have the required capabilities to support the referral request workflow, they are considered both a POS and an RMS).
 - RMS Source: Used by Requester HCP to initiate, monitor and communicate about the referral request.
 - RMS Target: Used by Performer HCP to receive, respond to, manage and communicate about the referral request and associated tasks.
 - **Health Service Directory (HSD):** Used by HCP or service provider to discover services and service providers to address patient referral needs. RMS typically bundle in HSD functionality to better support referral workflows.
 - **Case Assigner:** A person at a managed specialty/provider group that assigns incoming referral/consult requests to a performer HCPs. May also be an algorithm (system) that automatically assigns requests to an available performer HCP based on wait time, availability and location.

This use case diagram represents the participants and their role in the use case with a high-level view of the flow of information.



Use Case - Primary Flow

The following provides a textual description corresponding to the use case diagram.

1. Requester HCP has picked a service from a Service Directory.
2. Requester HCP completes form for a Service Request.
3. Requester HCP sends the Service Request from their RMS Source to a specific Performer HCP.
4. Performer HCP receives a notification for the eReferral in their Referral Management System (RMS Target).
5. Performer HCP reviews the request, and responds by providing a consult instead of booking the patient in for an appointment.
6. Performer HCP is prompted to submit time spent on the case to provide eConsult advice.

Use Case - Alternate Flows

The following list provides possible alternate flows that may occur within this use case.

1. Referral Revoked by Requester HCP: Requester HCP may revoke the referral request, this status is noted in their RMS Source and automatically forwarded to Performer RMS and POS. (Step 4)

2. Referral Declined by Performer HCP: Performer HCP may be unable to provide the service, this status is noted in their RMS Target and automatically forwarded to Requester RMS and POS. (Step 4)
3. Referral Declined by Patient: Patient may decline the service and the status is notified in the Requester RMS and POS (Step 1 – 4).
4. Clarification Requested: After a consult has been provided, if further information is needed, the Requester HCP has the ability to request clarification from the Performer HCP. (Step 5)
5. Request for Information
 - a. More Information Requested: Performer HCP requests for more information from the Requester HCP. (Step 4)
 - b. More Information Provided: Requester HCP provides the information asked by the Performer HCP.
6. Case Cancelled: The Requester HCP can decide to cancel the referral request if it is no longer needed. (Step 5)
7. Case Redirect by Case Assigner: The Case Assigner at the specialty can redirect the consult request to another Performer HCP, which does not close the original consult request, but simply redirects it to another target. (Step 4)
8. Case Redirect by Requester HCP: The Requester can redirect the consult request to another Managed Specialty, specific provider or group. This closes the original consult request and creates a new request for the recipient. (Step 5)
9. Return Case: The case is returned by the Performer HCP to the Case Assigner to be assigned to another specialist. (Step 4)

6 UC-05: Referral to Home and Community Care

Description

Requester Health Care Provider sends a referral request to a Performer Health Care Provider, Performer Health Care Provider completes assessment and sends referral request to downstream Performer Health Care Provider

Scenario

Jane Doe is an independent senior who lives alone. She had a recent injury due to a fall at home that resulted in an ER visit. In a follow-up appointment, Dr. Jones, her family doctor, notices her appearance is not as crisp as usual. Jane admits she is struggling with keeping up with the house chores due to her injury and that she is also afraid of falling again.

Dr. Jones suggests that she might benefit from some personal support services and maybe other home related services to help her cope with her condition. Once Jane consents to being referred for home care services Dr. Jones searches for homecare services from his electronic medical record (EMR), which is integrated with a Referral Management System (i.e. RMS Source). He selects the Local Health Authority Home and Community Services which provides coordination for all home care services in the region Jane resides. He is presented with a referral form which is prepopulated with some of the patient information from his EMR.

From the list of available services on the referral form Dr. Jones selects the personal support service option and the home safety assessment option. Dr. Jones continues to fill out the form by identifying the primary diagnosis, the reason for referral, any allergies Jane may have. Then he includes the contact information for Jane's daughter that lives in Barrie.

Dr. Jones decides the information selected on the form is appropriate for Jane's condition and he clicks 'Submit' to send the referral request to the local health authority home and community services Referral Management System (i.e. RMS Target). The RMS Source System determines that Jane has signed up for email notifications and sends Jane an email to confirm that the referral has been requested.

The RMS Target notifies April May, a local health authority Care Coordinator, of the incoming referral. April upon receiving the notification reviews the referral information, marks the referral "Accepted" in the RMS Target and includes a note to indicate the patient will be assessed for home care services over the phone. The RMS Target notifies the RMS Source of the acceptance. The message is conveyed to the Dr. Jones in the RMS Source system.

April then contacts Jane over the phone to find out a few more details about her home setting. While talking to Jane April documents the responses in the InterRAI Contact Assessment tool/form. After this, April documents the encounter in her system of record and determines that Jane is eligible for home care services offered through the local health authority.

April proceeds to create a service plan for Jane and orders personal support services and occupational therapy services (for the home safety assessment) from the Acme Care Enhanced Services Inc. (ACES) agency. Once completed April marks the referral "Completed" in the RMS Target. The RMS Target prompts April to select service plan items to be included as a service summary in the completion message.

Jane selects both services ordered from ACES on Jane's behalf and submits the update. The RMS Target sends the completion notification to RMS Source, including the service plan summary and any additional details April chose to include. The RMS Source notifies Dr. Jones of the referral completion and sends an email notification to Jane to keep her informed of the referral outcomes.

Triggers, Pre-conditions, Post-conditions

Triggers

Patient visit with a Requester Health Care Provider (HCP) that results in a referral

Pre-conditions

- Integration between Requester POS, RMS and a Health Services Directory
- In jurisdictions where explicit consent is required to send the referral (including PHI):
 - Patient provides, or has previously provided, consent to share their PHI with Performer HCP
- Patient has provided consent to being notified about referral and appointment status through their email
- Service directory validates that available services are valid and up-to-date
- Patient demographic information in Requester POS system is valid and up-to-date

Post-conditions

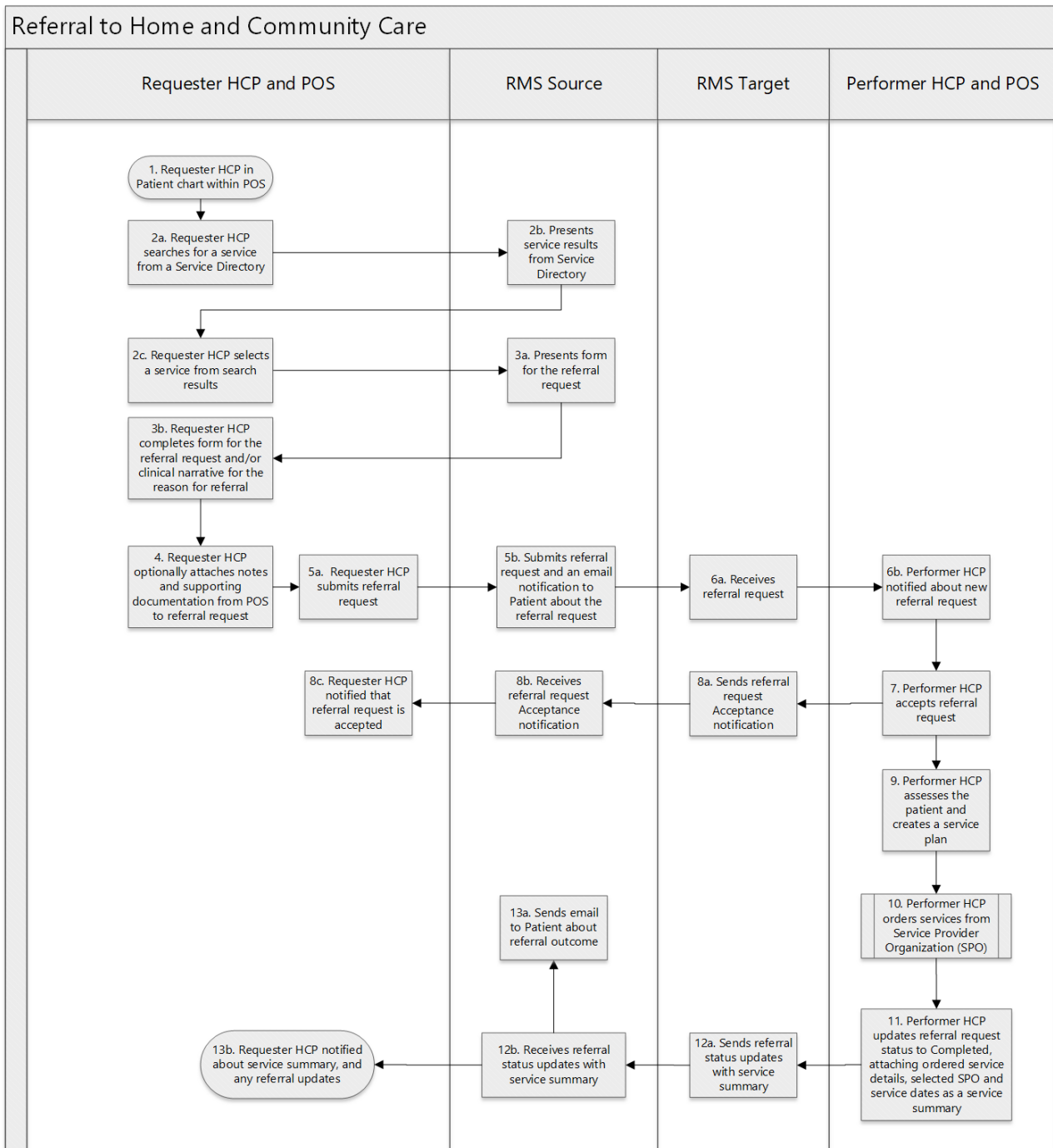
- The Performer HCP sets up and updates tasks for the service request, and Requester HCP is updated on the on-going status . Or,
- The service request was not fulfilled or was ended before completion because:
 - The Requester HCP cancels the referral request and a notification is sent to Performer HCP
 - The Performer HCP declines the referral request and a notification is sent to Requester HCP
 - The Patient declines the referral request

Use Case Participants and Workflow diagram

- **Requester HCP:** A Health Care Provider, medical office assistant or service provider that initiates the eReferral workflow for a patient by sending a referral request
- **Performer HCP:** A Health Care Provider, medical office assistant or service provider that receives the referral request and performs the requested services
- **Point of Service Systems (POS):** Used by Requester/Performer HCPs to view and manage personal health information (PHI). These systems include hospital information systems (HIS), primary care electronic medical record systems (EMR), community and ambulatory health information systems, and provincial/regional EHR viewers.
 - Requester POS systems initiate and potentially track and manage healthcare referral/consult requests.
 - Performer POS receives the referral/consult request and is used to provide the requested healthcare services
- **Referral Management Systems (RMS):** Support the exchange of referral requests between Requester HCP and Performer HCP where one or both of their POS systems do not have the required capabilities to support the workflow (if POS systems do have the required capabilities to support the referral request workflow, they are considered both a POS and an RMS)
 - **RMS Source:** Used by Requester HCP to initiate, monitor and communicate about the referral request.
 - **RMS Target:** Used by Performer HCP to receive, respond to, manage and communicate about the referral request and associated tasks

- **Health Service Directory (HSD):** Used by HCP or service provider to discover services and service providers to address patient referral needs. RMS typically bundle in HSD functionality to better support referral workflows

This use case diagram represents the participants and their role in the use case with a high-level view of the flow of information.



Use Case - Primary Flow

The following provides a textual description corresponding to the use case diagram.

1. Requester HCP starts in the patient record in the POS system and launches the integrated RMS with Service Directory.
2. Requester HCP searches and selects an appropriate service from a Service Directory integrated with their POS and RMS systems.
3. Requester HCP is presented with and completes the appropriate referral form, and/or fills in a free-text clinical narrative to support the reason for the referral. Some of the data is already filled in from the integrated POS system.
4. Requester HCP may optionally attach additional clinical notes and supporting documentation from the POS system to support the referral request.
5. Requester HCP submits the referral request and RMS Source submits an email to the Patient about the sent referral request.
6. Performer HCP is notified about the incoming referral request by RMS Target and reviews the service request details.
7. Performer HCP confirms referral request acceptance in RMS Target.
8. RMS Target sends acceptance message along with any optional note to the Requester HCP.
9. Performer HCP assesses the patient and creates a service plan.
10. Performer HCP orders services from a Service Provider Organization.
11. Performer HCP updates the referral request status to Completed in the RMS Target and includes the ordered service details in the communication as a service summary, identifying that the selected SPO will start delivering the requested services on a certain date.
12. RMS Target sends the referral status update including the service summary and any additional details specified by the Performer HCP to RMS Source.
13. Requester HCP and Patient are updated about the referral status and outcomes.

Use Case - Alternate Flows

The following list provides possible alternate flows that may occur within this use case.

Alternate Flow #1 – Request For Information (RFI)

Upon speaking with Jane, April determines that she might also need to speak to a dietician. April sends a request to Dr. Jones for Jane's most recent bloodwork results to help inform the dietician's consultation.

1. Performer HCP requests for more information (e.g. an additional report/result) and sends a Request for Information (RFI) from their RMS Target to the RMS Source to notify the Requester HCP of the additional information. (Step 7 - 10)
2. Requester HCP views the RFI request in the RMS Source system and decides to update the referral with the requested information (the document attachment is attached to the referral by RMS Source).
3. Performer HCP receives the referral update in RMS Target and processes the referral to completion using the remaining steps in the basic flow.

Alternate Flow #2- Referral Updates

Upon submitting the initial referral Dr. Jones determines Jane should also be assessed for Long Term placement. He discusses this possibility with Jane on her subsequent scheduled visit and Jane agrees to consider this possibility.

1. Requester HCP updates the initial referral to add additional service(s) and commits the update in RMS Source. (Step 6 - 13)
2. Performer HCP receives the updated service request including the new service in her RMS Target system and processes the modified referral to completion using the remaining steps in the basic flow.

Alternate Flow #3 – Cancellation

Dr. Jones is notified in his EMR (out of scope for this workflow) that Jane condition has changed and she is now admitted to an in-patient/client unit at the local hospital. Not knowing when Jane's condition will improve in order to live independent in the community Dr. Jones decides to cancel the home care referral in the RMS Source system.

1. Requester HCP cancels the service request in the RMS Source system. (Step 6 - 10)
2. RMS Source sends the cancellation message to the RMS Target and notifies Patient by email that her initial referral has been cancelled
3. Performer receives the referral cancellation notification in the RMS Target. If the service plan has already been created, they discharge the services ordered with the Service Provider Organization (which will receive an automatic notification, out of scope for eReferral flow) and closes the patient file.

7 UC-06: Referral to a Central Intake

Description

Requester Health Care Provider sends a referral request to a Performer Health Care Provider

Scenario

Jane Doe has a ski accident, and her primary care practitioner (PCP), Dr. Jones, determines that Jane has torn her anterior cruciate ligament in the right knee. Dr. Jones begins the process of referring Mary Jane to the appropriate services and initiates a search for the service from his EMR, which is integrated with a Referral Management System (i.e. RMS Source). He selects the regional MSK Central Intake referral program from the list of results, and is presented with a form with some of the information already automatically filled in with data from her EMR. He completes the form and submits the request to the Central Intake's Referral Management System (i.e. RMS Target A) and an email is sent to Jane confirming that the referral has been requested.

The RMS Target A at Central Intake notifies the advanced practice provider, Nurse April about the incoming request, who contacts Jane for an assessment to determine if Jane is a surgical candidate. After completing the assessment, April determines that Mary Jane is a surgical candidate. RMS Target A notifies Dr. Jones through his RMS and EMR about the assessment outcome, and sends a referral request to the Orthopedic specialties' Referral Management System (i.e. RMS Target B).

RMS Target B notifies Dr. Treat, the target orthopedic surgeon who books an appointment to see Jane. Updates are sent back to Dr. Jones RMS and EMR about the referral status and associated tasks through its lifecycle.

Triggers, Pre-conditions, Post-conditions

Triggers

Patient visit with a Requester Health Care Provider (HCP) that results in a referral

Pre-conditions

- Integration between Requester POS, RMS and a Health Services Directory.
- In jurisdictions where explicit consent is required to send the referral (including PHI):
 - Patient provides, or has previously provided, consent to share their PHI with Performer HCP.
- Patient has provided consent to being notified about referral and appointment status through their email.
- Service directory validates that available services are valid and up-to-date.
- Patient demographic information in Requester POS system is valid and up-to-date.

Post-conditions

- The Performer HCP sets up and updates tasks for the service request, and Requester HCP is updated on the on-going status . Or,
- The service request was not fulfilled or was ended before completion because:

- The Requester HCP cancels the referral request and a notification is sent to Performer HCP.
- The Performer HCP at Central Intake declines the referral request and a notification is sent to Requester HCP.
- The Performer HCP at the downstream service declines the referral request and a notification is sent to Case assigner / Performer HCP at Central Intake
- The Patient declines the referral request.

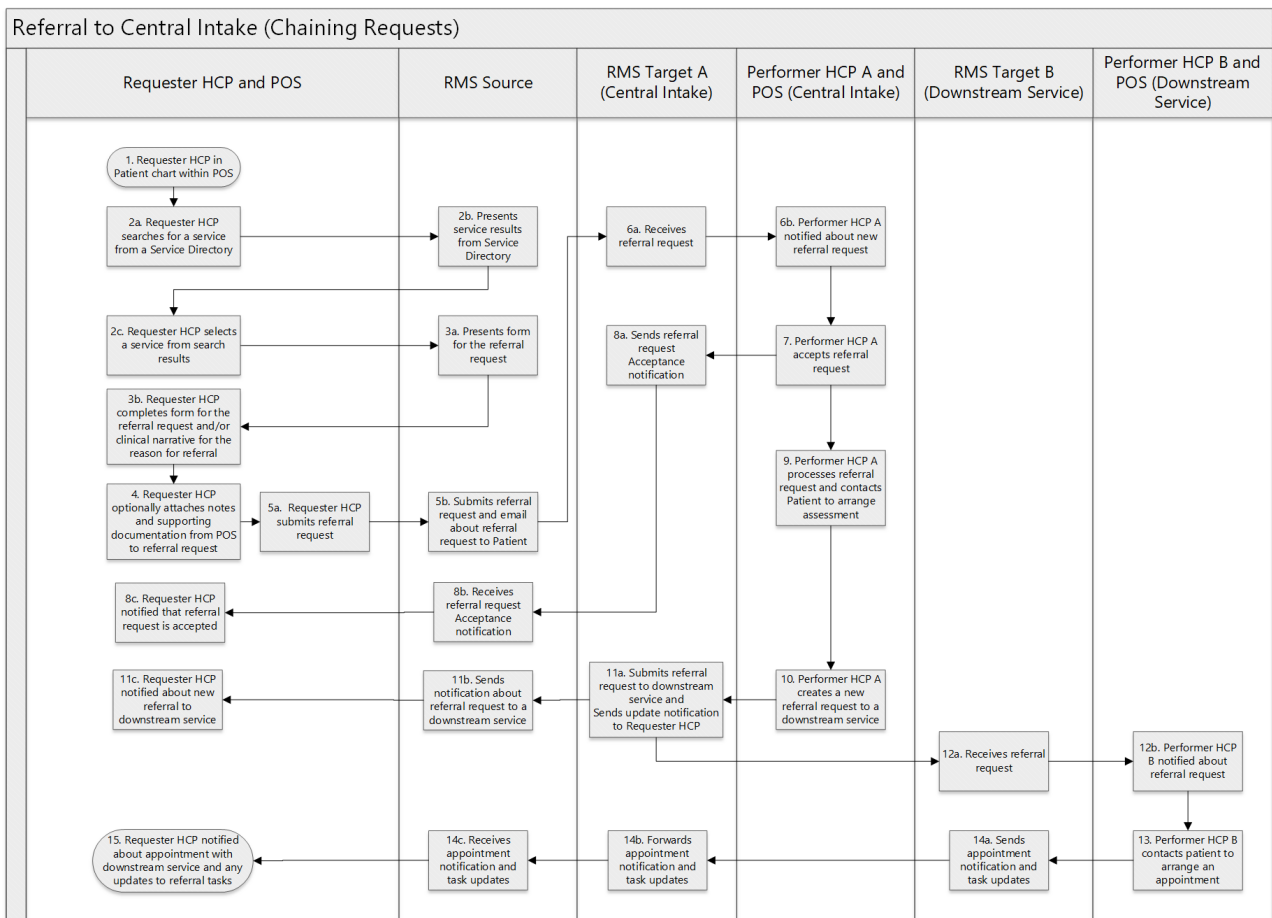
Use Case Participants and Workflow diagram

- **Requester HCP:** A Health Care Provider, medical office assistant or service provider that initiates the eReferral workflow for a patient by sending a referral request
- **Performer HCP:** A Health Care Provider, medical office assistant or service provider that receives the referral request and performs the requested services
- **Point of Service Systems (POS):** Used by Requester/Performer HCPs to view and manage personal health information (PHI). These systems include hospital information systems (HIS), primary care electronic medical record systems (EMR), community and ambulatory health information systems, and provincial/regional EHR viewers.
 - Requester POS systems initiate and potentially track and manage healthcare referral/consult requests.
 - Performer POS receives the referral/consult request and is used to provide the requested healthcare services
- **Referral Management Systems (RMS):** Support the exchange of referral requests between Requester HCP and Performer HCP where one or both of their POS systems do not have the required capabilities to support the workflow (if POS systems do have the required capabilities to support the referral request workflow, they are considered both a POS and an RMS)
 - **RMS Source:** Used by Requester HCP to initiate, monitor and communicate about the referral request.
 - **RMS Target:** Used by Performer HCP to receive, respond to, manage and communicate about the referral request and associated tasks
- **Health Service Directory (HSD):** Used by HCP or service provider to discover services and service providers to address patient referral needs. RMS typically bundle in HSD functionality to better support referral workflows
- **Case Assigner:** A person at a central intake that assigns incoming referral/consult requests to a performer HCP. May also be an algorithm (system) that automatically assigns requests to an available performer HCP based on wait time, availability and location.

The use case diagrams represents the participants and their role in the use case with a high-level view of the flow of information.

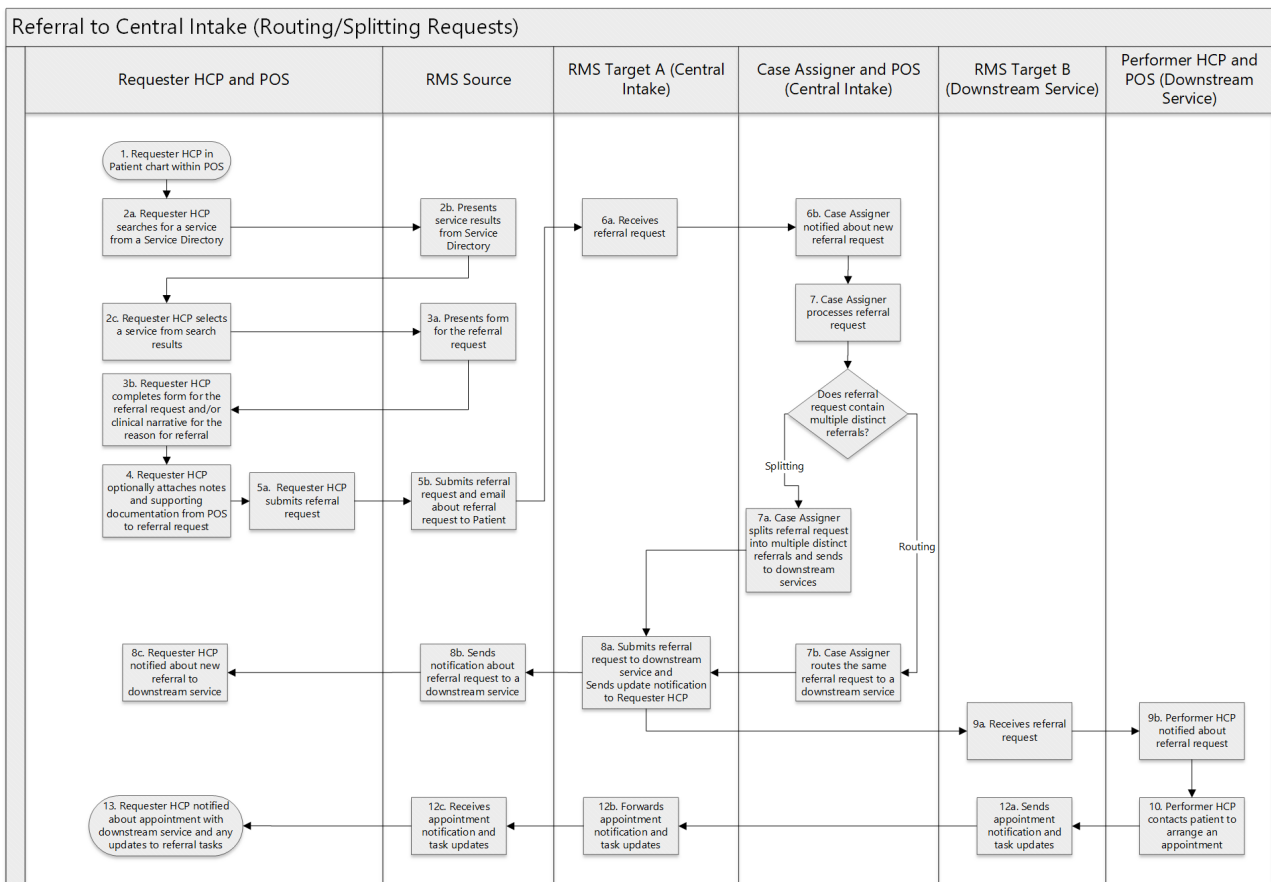
Chaining Requests

- **Chaining:** A new, distinct referral is created to a downstream service based on the original referral after a service is performed at central intake.



Routing/Splitting Requests

- **Routing:** The same referral request is forwarded to a new downstream service from Central Intake
- **Splitting:** The referral request gets split into multiple parts that logically make up the original request at Central Intake, to be fulfilled by different downstream services



Use Case - Primary Flow

The following provides a textual description corresponding to the use case diagrams.

Chaining Requests

1. Requester HCP starts in the patient record in the POS system and launches the integrated RMS with Service Directory.
2. Requester HCP searches and selects an appropriate service from a Service Directory that uses a central intake model.
3. Requester HCP is presented with and completes the appropriate referral form, and/or fills in a clinical narrative to support the reason for the referral within their POS. Some of the data is already filled in from the integrated POS system.
4. Requester HCP may optionally attach additional clinical notes and supporting documentation from the POS system to support the referral request.
5. Requester HCP submits the referral request (clinical documentation and/or referral form), RMS Source submits an email to the Patient about the sent referral request.
6. RMS Target A (Central Intake) receives the referral request and notifies Performer HCP A.
7. Performer HCP A confirms referral request acceptance in RMS Target A.
8. RMS Target A sends acceptance message along with any optional note to the Requester HCP.
9. Performer HCP A processes the referral request and contacts patient for an assessment.

- Processing includes analysis of referral request needs, urgency, downstream service wait times, location and may include consideration for patient preference for location, waiting period and health care provider.
10. Performer HCP A creates a new distinct referral request to a downstream service, RMS Target B.
 11. RMS Target A sends the referral request to the downstream service, and a notification to RMS Source, which informs Requester HCP about the new referral.
 12. RMS Target B receives the referral request and notifies Performer HCP B.
 13. Performer HCP B contacts the patient to arrange an appointment.
 14. RMS Target B sends appointment notification and task updates to RMS Source and RMS Target A.
 15. Requester HCP and Performer HCP A is notified through their POS and RMS of the date/time/location of the first patient encounter with Performer HCP B and any changes to the referral request and associated tasks.

Routing/Splitting Requests

1. Requester HCP starts in the patient record in the POS system and launches the integrated RMS with Service Directory.
2. Requester HCP searches and selects an appropriate service from a Service Directory that uses a central intake model.
3. Requester HCP is presented with and completes the appropriate referral form, and/or fills in a clinical narrative to support the reason for the referral within their POS. Some of the data is already filled in from the integrated POS system.
4. Requester HCP may optionally attach additional clinical notes and supporting documentation from the POS system to support the referral request.
5. Requester HCP submits the referral request (clinical documentation and/or referral form), RMS Source submits an email to the Patient about the sent referral request.
6. RMS Target A (Central Intake) receives the referral request and notifies Case Assigner.
7. Case Assigner processes the referral request.
 - a. If referral request contains multiple distinct referrals, it is split into its constituent parts to be sent to appropriate downstream services to fulfill different parts of the request.
 - b. If referral request is just a single referral, it is routed to the appropriate downstream service as the same request.
8. RMS Target A sends the referral request to the downstream service, and a notification to RMS Source, which informs Requester HCP about the new referral.
9. RMS Target B receives the referral request and notifies Performer HCP.
10. Performer HCP contacts the patient to arrange an appointment.
11. RMS Target B sends appointment notification and task updates to RMS Source and RMS Target A.
12. Requester HCP is notified through their POS and RMS of the date/time/location of the first patient encounter with Performer HCP and any changes to the referral request and associated tasks.

Use Case - Alternate Flows

The following list provides possible alternate flows that may occur within this use case.

1. Request for Information from Central Intake:
 - a. Performer HCP requests more information from Requester HCP and sends a request for information to RMS Source from Central Intake RMS.
 - b. Requester HCP views the Request for Information and updates the referral with the requested information.

- c. Performer HCP receives the referral update in RMS Target and processes the referral using the remaining steps in the flow
2. Request for Information from Downstream Service:
 - a. Performer HCP (B) at Downstream Service requests more information from Requester HCP and sends a request for information to Central Intake RMS from their RMS.
 - b. The request for information is forwarded from Central Intake by Case Assigner/ Performer HCP (A) to Requester HCP (RMS Source)
 - c. Requester HCP views the Request for Information and updates the referral with the requested information.
 - d. Referral update is received in Central Intake RMS and forwarded by Performer HCP to Downstream Service RMS
 - e. Performer HCP (B) receives the referral update in Downstream Service RMS and processes the referral using the remaining steps in the flow
3. Decline from Downstream Service:
 - a. Performer HCP (B) at Downstream Service declines the referral request, the decline notification is sent to Central Intake RMS from their RMS.
 - b. Case Assigner / Performer HCP (A) at Central Intake receives the decline, sends a referral request to another Downstream Service, and an update to Requester HCP about the new Downstream Service
 - c. Requester HCP receives the update in their RMS Source.
4. Cancellation:
 - a. Requester HCP cancels the service request in the RMS Source system. RMS Source sends the cancellation message to the RMS Target and notifies Patient by email that the initial referral has been cancelled.
 - b. Performer HCP (A) / Case Assigner receives the referral cancellation notification in the Central Intake RMS. If a referral request has been sent/forwarded to a Downstream Service, they send the cancellation message to the Downstream Service RMS
5. Referral Updates
 - a. Requester HCP updates the initial referral to add additional service(s) and commits the update in RMS Source.
 - b. Performer HCP (A) receives the updated service request including the new service in the Central Intake RMS system and processes the modified referral to completion using the remaining steps in the basic flow.

8 Consolidated Questions

- What is the relative priority for each of these Use Cases in your Jurisdiction?
 - Please rank the use cases in order from Highest Priority to lowest priority, (e.g. UC-01 > UC-03 > UC-04...)

Questions by use case

Use Case ID	Use Case Name	Questions
UC-01	Referral for a service	
UC-02	Referral for a service with a booked appointment	
UC-03	Consultation Request	<ul style="list-style-type: none"> • Is the managed specialty model supported in jurisdictions outside Ontario? • Performance KPI questions at the end of the consult to understand cost/benefit metrics – would this apply to all jurisdictions?
UC-04	Convert Referral to Consultation	
UC-05	Referral to Home and Community Care with Care Coordinator	<ul style="list-style-type: none"> • Is this use case a special case for UC-06: Central Intake? Does it need to be a distinct use case?
UC-06	Referral to Central Intake	<ul style="list-style-type: none"> • The proposed scenario and workflow steps needs review