UC- 02: Consultation Request

eReferral eConsult Development

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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.

In this example, the family physician's EMR could be integrated with an external Referral Management System (RMS Source), or the EMR could have the capability to directly manage the consult (initiate the search for a specialty, gather required information, create the consult request, submit consult request to RMS Target, track the status of the consult, and receive notifications). In that case, the EMR takes on the responsibility of managing the consult, essentially acting as the RMS Source in the diagram below.

Variation 1 - 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 searches for the specific provider, creates the eConsult request, and then submits an eConsult case.

Variation 2 - 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 searches for an organization, creates the eConsult request, 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.

Variation 3 - Request to Managed specialty

Jane's family physician searches for the specialty - Urology, creates the eConsult request, 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.

After Case Assignment

The Urologist receives a notification for the assigned case, logs into their POS, or POS integrated with a 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. 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 directly from their POS, or POS integrated with RMS Source.

Triggers, Pre-conditions, Post-conditions

Triggers

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

Pre-conditions

- If POS does not have capability to manage the consult workflow
    - Integration between Requester POS and an external RMS Source is required.
- Integration with 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.
- Health 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. And/Or,
- The Requester HCP initiates an eReferral because the Performer HCP 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. Or,
- The Performer HCP rejects the consult request.

Use Case Participants and Workflow diagrams

- **Requester HCP**: A Health Care Provider or delegate (e.g. medical office assistant), or other service provider that initiates the eConsult workflow for a patient by sending a consult request
- **Performer HCP**: A Health Care Provider or delegate, (e.g. medical office assistant), or other service provider that receives the consult request and performs the requested services
- **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. Performer HCPs may also self-assign to incoming consult requests.
- **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.

Where integration with other systems exist, a POS system is potentially a gateway to third-party-managed health records and to services that facilitate eConsult processes. POS system functionality can exist at multiple points in the eConsult workflow, and a given system might provide this functionality in some workflows, and not in others.

- **Referral Management Systems (RMS)** - Support the exchange of consult 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 an EMR/HIS does have the required capabilities to support the consult request workflow, they are considered both a POS and an RMS and the EMR/HIS may perform one or both of the roles of RMS Source or RMS Target)**. Capabilities can be implemented as API services and\or interactive applications and a single system may provide one or more capabilities to enable and or enhance eConsult workflows. They can also be considered helper apps. Depending on the use case, a RMS or a POS with referral capability may perform one or both of the following roles:
    - **RMS Source:** Used by Requester HCP to initiate, monitor and communicate about the consult request. RMS Source functionality will vary between systems used by service providers to respond to different request types but may include some or all the following:
        - search for available services or service providers (potentially through integration with a Healthcare Service Directory (HSD));
        - access and complete electronic forms required by the service provider;
        - attach supporting information (typically through integration with POS);
        - submit a request;
        - monitor status;
        - receive information about appointments and tasks planned and performed in response to the request;
        - communicate with other service providers using messaging.
    - **RMS Target:** Used by Performer HCP to receive, respond to, manage and communicate about the consult request and associated tasks. RMS Target functionality will vary between systems used by service providers to respond to different request types but may include some or all the following:
        - receive, review, acknowledge, accept, reject and triage requests and supporting information;
        - communicate with the requester using messaging;
        - plan tasks to be performed in response to the request;
        - appointment scheduling, and
        - monitoring the status of planned tasks.

Note:

- A single system **MAY** act as the RMS Source and the RMS Target for a request or one or the other depending on the capabilities of the system, the role of the user for a specific request and the RMS systems used by requester and performer.
- In practice, either or both of the systems exchanging referral information may be a specialized Referral Management Systems (RMS), a message broker, or any of a range of systems used at the Point of Service (POS) by people who request, triage, plan or perform services as part of an electronic referral or consultation process. The requirement is only that conformant systems **SHALL** provide the capabilities expected of the role they declare.
- An RMS Source and RMS Target **MAY** support both eReferral and eConsult functionality, or only support one of eReferral and eConsult

- **Health Service Directory (HSD):** Used by HCP or service provider to discover services and service providers to address eConsult needs. RMS typically bundle in HSD functionality to better support consult workflows, or in cases where the POS system has the required capabilities to support the consult request workflow, the HSD could be centrally managed (i.e. jurisdictional) or provided by a 3rd party and integrated with the POS system.

An HSD may provide one or more of multiple functions, including:

- Health service discovery mechanisms
- Health service definition hosting and data federation services
- Integration with a forms repository to associate health services with forms used to support the referral process

Implementation Scenarios

There are different implementation scenarios that can support the Consultation request use case:

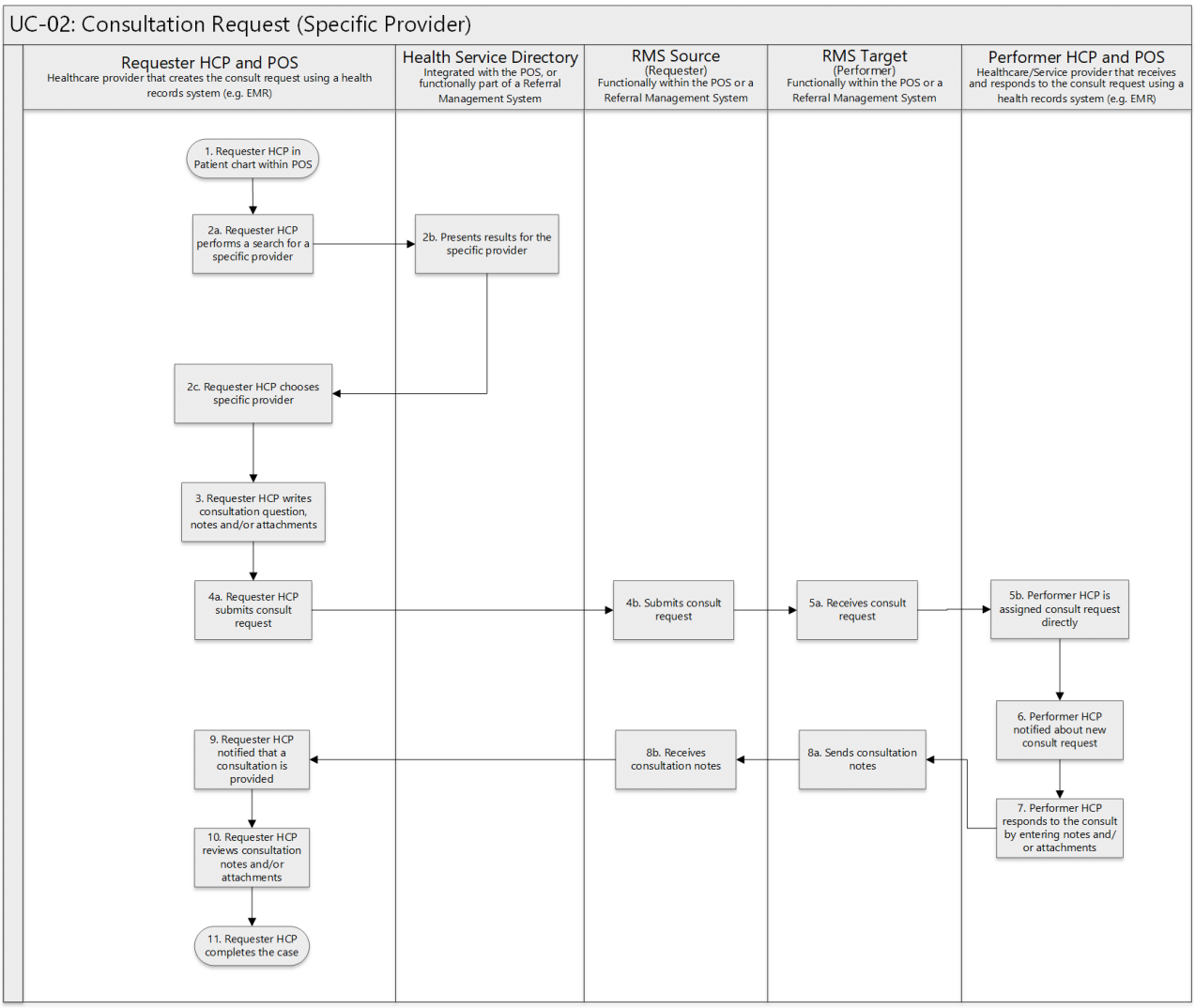
1. Implemented in Referral Management Systems (RMS) end-to-end for Requester and Performer systems.
2. Implemented in POS end-to-end for Requester and Performer systems (e.g. An EMR would have the eConsult capability for the Requester and an EMR/HIS would have the eConsult capability for Performers).
3. Implemented in a combination of the above (e.g. RMS for sender and a POS for Performer system or vice versa)
4. Implemented in a standalone platform/portal for both Requester HCP and Performer HCP (e.g. OTN hub for Ontario eConsult)

It is important to identify the role each participant is playing in the use case so that the workflow can be mapped to the technology available within a particular implementation scenario, which may vary between jurisdictions. The use cases provide examples and are not meant to be inclusive of all possible implementation choices and do not represent required implementation choices.

Core Interoperability Specification Requirements

Please refer to the Core Interoperability Specification Requirements for a breakdown of each use case workflow and mapping of the Use Case Actor to a Technical Actor, Supported Services and Interoperability Profiles. Jurisdictions and vendors have to identify their role (e.g. actors) and supported services for each of the use cases in scope of the CA-eReferral/eConsult specification.

These use case diagrams represent the participants and their role in the end-to-end use case with a high-level view of the flow of information.



Use Case - Primary Flow (Specific Provider)

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

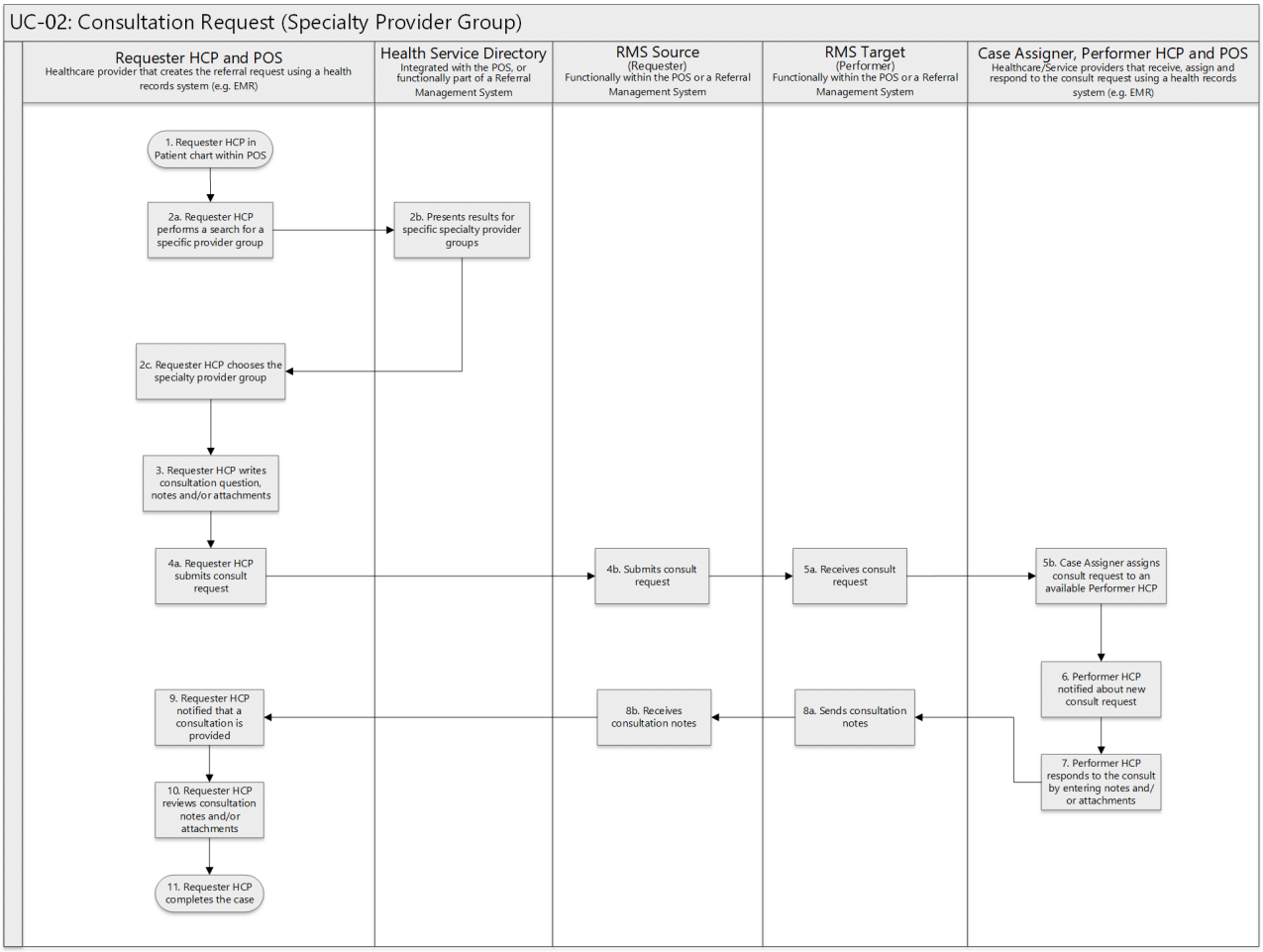
1. Requester HCP starts in the patient record in the POS system and indicates the need for a consult.
2. Requester HCP searches and selects a specific provider from the Service Directory (Service Directory could be integrated with the POS system, or part of an RMS Source that is integrated with POS system).
3. Requester HCP writes consultation question, attaches images and notes.
4. Requester HCP submits consult request and RMS Source sends the request.
5. Performer HCP is assigned to the request which is received by RMS Target.
6. Performer HCP receives a notification in their POS on the arrival of the new consult request.
7. Performer HCP accesses the consult request through their POS, or their POS which is integrated with the RMS Target, and responds to the consult request by entering in notes and/or attachments.
8. Performer HCP sends the consultation notes back to the Requester HCP.
9. Requester HCP receives a notification in their POS indicating that a consult has been provided.
10. Requester HCP reviews the consultation response using their POS, or POS integrated with RMS Source.
11. Requester HCP is satisfied with the information, and completes the case.

Use Case - Alternate Flows (Specific Provider)

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 10)
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 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)
5. 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. (UC-01: Referral to a Service) (Step 7)

6. Case Rejected by Performer: The Performer HCP rejects the consult because it is not appropriate or is missing information. This closes the consult request. (Step 7)
7. Performer HCP completes Performance KPI Survey: Performer HCP may answer questions related to billing and time spent on case after providing the consult. (Step 7)
8. Requester HCP completes Performance KPI Survey: Requester HCP may answer questions related to service utilization and feedback for Performer HCP. (Step 11)



Use Case - Primary Flow (Specialty Group)

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 indicates the need for a consult.
2. Requester HCP searches and selects a specialty group from the Service Directory (Service Directory could be integrated with the POS system, or part of an RMS Source that is integrated with POS system).
3. Requester HCP writes consultation question, attaches images and notes.

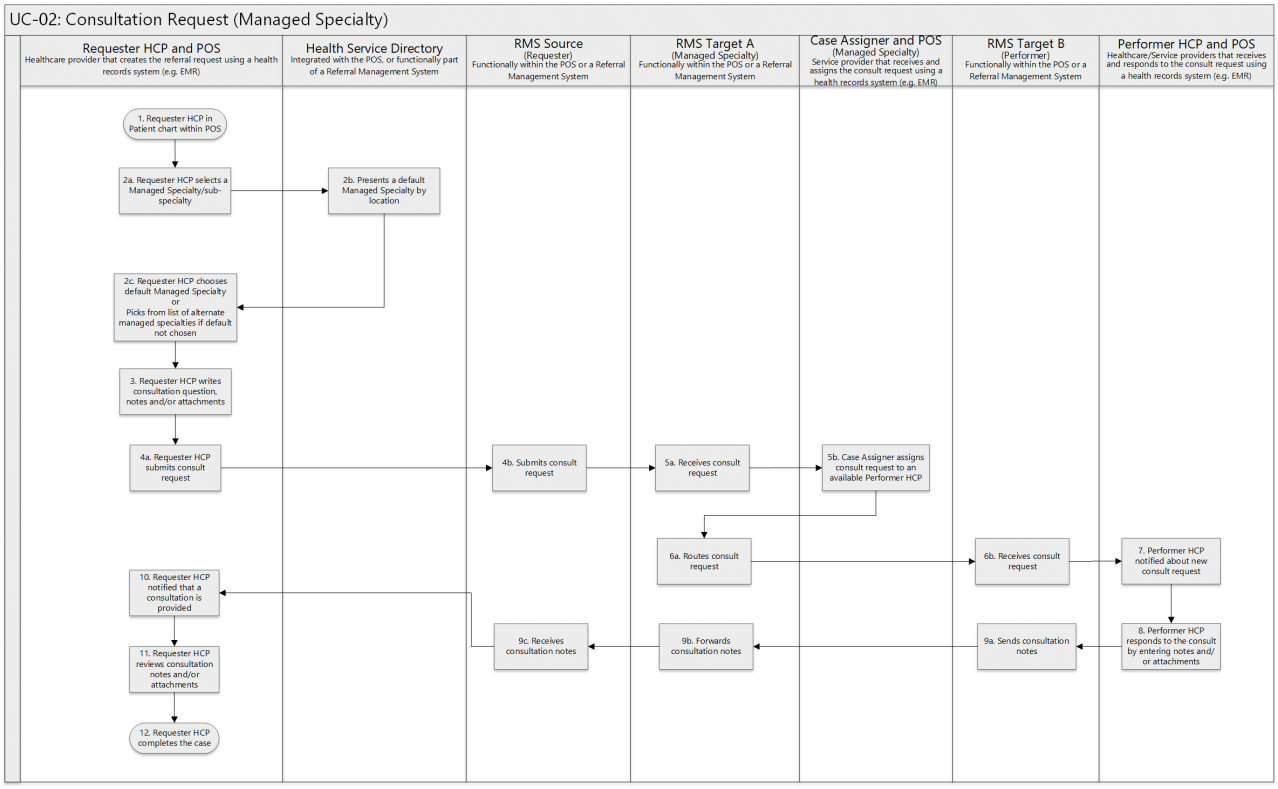
4. Requester HCP submits consult request, and RMS Source sends the request.
5. Case Assigner at the specialty group receives the consult request through RMS Target and assigns to a Performer HCP.
6. Performer HCP receives a notification in their POS on the arrival of the new consult request.
7. Performer HCP accesses the consult request through their POS, or their POS which is integrated with the RMS Target, and responds to the consult request by entering in notes and/or attachments.
8. Performer HCP sends the consultation notes back to the Requester HCP.
9. Requester HCP receives a notification in their POS indicating that a consult has been provided.
10. Requester HCP reviews the consultation response using their POS, or POS integrated with RMS Source.
11. Requester HCP is satisfied with the information, and completes the case.

Use Case - Alternate Flows (Specialty Group)

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 10)
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. (UC-01: Referral to a Service) (Step 7)
8. Case Rejected by Performer: The Performer HCP rejects the consult because it is not appropriate or is missing information. This closes the consult request. (Step 7)

9. Performer HCP completes Performance KPI Survey: Performer HCP may answer questions related to billing and time spent on case after providing the consult. (Step 7)
10. Requester HCP completes Performance KPI Survey: Requester HCP may answer questions related to service utilization and feedback for Performer HCP. (Step 11)



Use Case - Primary Flow (Managed Specialty)

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 indicates the need for a consult.
2. Requester HCP searches and selects a Managed Specialty (may include a sub-specialty) from the Service Directory. A default selection is provided based on location which can be overridden by Requester HCP. (Service Directory could be integrated with the POS system, or part of an RMS Source that is integrated with POS system).
3. Requester HCP writes consultation question, attaches images and notes.
4. Requester HCP submits consult request.
5. Case Assigner at the Managed Specialty receives the consult request through RMS Target A and assigns to an available Performer HCP.
6. RMS Target A (Managed Specialty) routes the consult request which is received by RMS Target B (RMS Target A plays the role of both an RMS target and source).

7. Performer HCP receives a notification in their POS on the arrival of the new consult request.
8. Performer HCP accesses the consult request through their POS, or their POS which is integrated with the RMS Target B, and responds to the consult request by entering in notes and/or attachments.
9. Performer HCP sends the consultation notes back to the Requester HCP and RMS Target A.
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, or POS integrated with RMS Source.
12. Requester HCP is satisfied with the information, and completes the case.

Use Case - Alternate Flows (Managed Specialty)

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 8)
    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 - 8)
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 7)
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 - 8)
6. Return Case: The case is returned by the Performer HCP to the Case Assigner to be assigned to another specialist. (Step 7)
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. (UC-01: Referral to a Service) (Step 8)
8. Case Rejected by Performer: The Performer HCP rejects the consult because it is not appropriate or is missing information. This closes the consult request. (Step 8)
9. Case Self-assigned by Performer: The Performer HCP may assign themselves to the case from a queue of incoming consult requests at the managed specialty, essentially acting as the Case Assigner. (Step 5)

10. Performer HCP completes Performance KPI Survey: Performer HCP may answer questions related to billing and time spent on case after providing the consult. (Step 8)
11. Requester HCP completes Performance KPI Survey: Requester HCP may answer questions related to service utilization and feedback for Performer HCP. (Step 12)