

# Middleware System Design Document

## HIRTA ITS4US Deployment Project

[www.its.dot.gov/index.htm](http://www.its.dot.gov/index.htm)

**Final Report — May 3, 2024**



U.S. Department of Transportation

## 1 Health Connector Middleware Design

The MOD Platform (Via) Transportation Management System (TMS) interfaces directly with two middleware products, one to allow data exchange between an Electronic Health Record (EHR) Medical Record System, and one to allow for exchange between Via and a Medicaid Broker System. This is depicted in Figure 1. The specifications and functionality include the following middleware products:

- MOD-EHR Middleware
- MOD-Medicaid Middleware

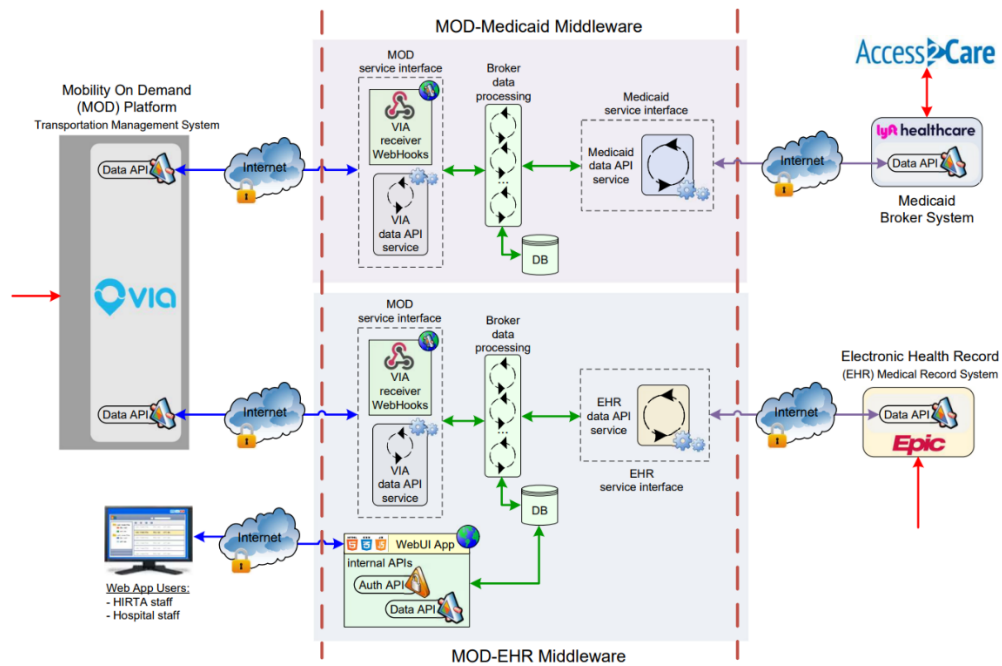


Figure 1. Middleware Systems Diagram (Source: HIRTA Team)

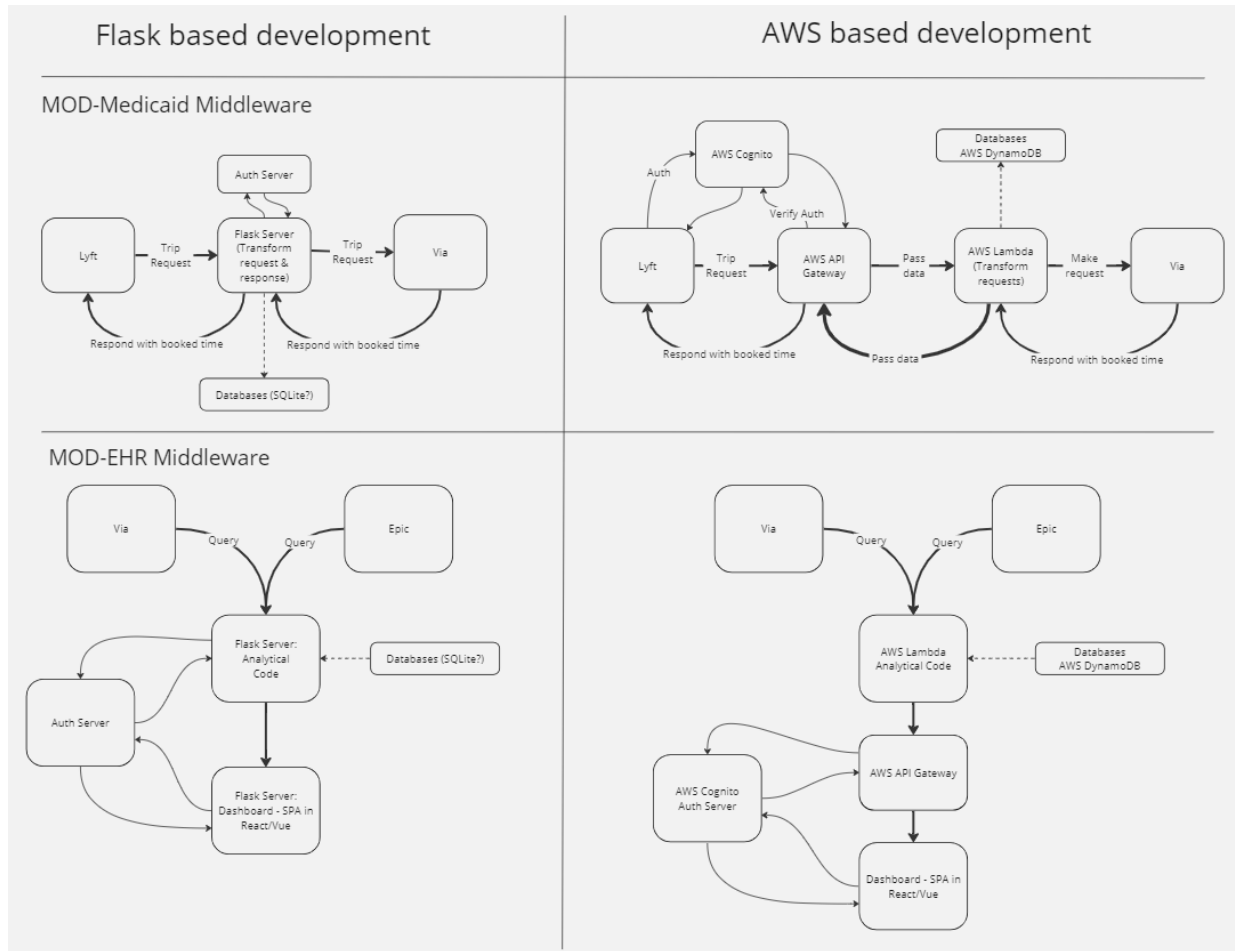


**Figure 2. Detailed Middleware Design (Source: HIRTA Team)**

Figure 2 provides a detailed diagram of the Middleware. The left side of the diagram identifies the Flask based development and the right side of the diagram describes the AWS based development required for the middleware.

Definitions related to the actors and use cases for the middleware design can be found in Section 2.

### 1.1 MOD-EHR Middleware

The MOD-EHR Middleware is an open-source middleware product that allows data exchanged from the MOD Platform TMS and the EHR Software system into a centralized location. The middleware will use the bi-directional APIs provided by Via as part of the MOD Platform TMS and the EHR software provider, such as Epic, to implement the data flows described below. A translation engine will be used at both API end points to translate data available from the APIs to a standardized data schema to enable the data exchange by the middleware application. A conceptual overview of the MOD-EHR Middleware application is shown in Figure 3 below.

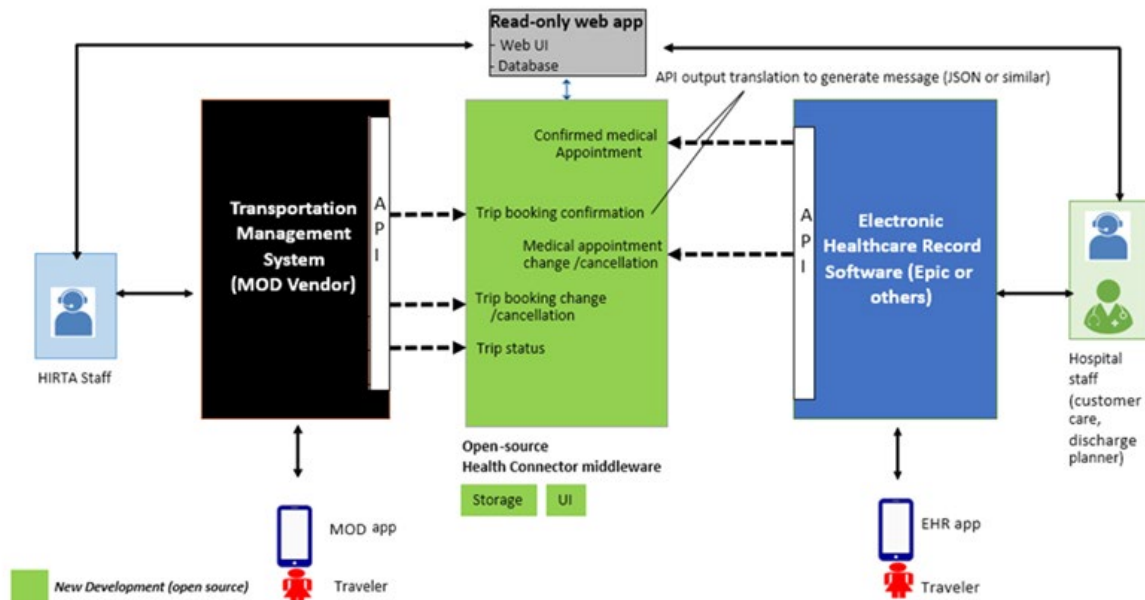


Figure 3. MOD - EHR Middleware Interface diagram (Source: HIRTA Team)

### 1.1.1 Electronic Healthcare Record Software (EHRS)

The EHR/Medical Record subsystem refers to the systems used by partner hospitals and clinics for the following functions:

1. **Appointment Booking/Management:** Provides a platform to partner hospitals and clinics for booking medical appointments and maintaining their appointments, including discharge and any subsequent referral activities. Healthcare partners use different EHR services, including Epic EHR, which provides a publicly available API.

### 1.1.2 MOD Vendor: Via

HIRTA has selected Via for all scheduling and trip management needs.

### 1.1.3 Interface between EHR and MOD

#### 1.1.3.1 Function(s):

The EHR API facilitates 2 primary data exchanges between the MOD-EHR Middleware and the EHR Software:

1. **Confirmed Medical Appointment Data:** Provides the ability for the MOD-EHR Middleware to receive a message that provides the details of the medical appointment data (e.g., date, time and location) from the EHR software.
2. **Medical Appointment Change or Cancellation:** Ability for the MOD-EHR Middleware to receive a message that provides the details of the modified medical appointment data and current status (e.g., active or cancellation request) from the EHR software. This data will be transferred on a 4-hour basis and will not be in real-time.

#### 1.1.3.2 Data Structure, Storage and Access:

The MOD-EHR Middleware will store 2 years worth of data. This will be deployed in an AWS environment accessible to HIRTA or HIRTA authorized users. Data from EHR will be retrieved every 4 hours and displayed on the webpage as available. This interval will be reduced if possible, but may be limited by system constraints on requests to the EHR system as the study population scale increases. Data from the MOD Platform TMS will be retrieved in real-time as updates are made to trip bookings and trip status.

#### 1.1.3.3 Requirement Traceability:

The following requirements identified in Table 1 are applicable to this component and met by this design, in addition to the table below, RC-HCR-1.2 is also satisfied by the MOD-EHR component. The following requirements can also be found in the Requirements Traceability Matrix.

**Table 1. Requirements for Interface between EHR and MOD**

| Req. No. | Requirement                                                                                                                                                                                                                |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A        | <b>Interface with EHRS (e.g., Epic)</b>                                                                                                                                                                                    |
| A1       | The middleware webpage shall retrieve and show all scheduled medical appointments and their status for all participants customers. The system shall retrieve such record on a pre-defined frequency (e.g., every 4 hours). |
| A2       | The medical appointment data shall include the following fields:                                                                                                                                                           |
| A2.a     | Patient Identity (first name, last name, and SSN or Address)                                                                                                                                                               |
| A2.b     | Appointment identifier                                                                                                                                                                                                     |
| A2.c     | Date of appointment                                                                                                                                                                                                        |
| A2.d     | Start time of appointment                                                                                                                                                                                                  |
| A2.e     | End time of appointment (if known)                                                                                                                                                                                         |
| A2.f     | Location of appointment                                                                                                                                                                                                    |
| A2.g     | Appointment status (e.g., booked, cancelled, no-show)                                                                                                                                                                      |
| B        | <b>Interface with MOD</b>                                                                                                                                                                                                  |
| B1       | The middleware shall request transportation appointment data from MOD vendor for a customer when requested by a system user on the middleware webpage.                                                                     |
| B2       | The transportation appointment data shall include the following fields:                                                                                                                                                    |
| B2.a     | First name                                                                                                                                                                                                                 |
| B2.b     | Last name                                                                                                                                                                                                                  |
| B2.c     | Pick up location                                                                                                                                                                                                           |
| B2.d     | Drop off location                                                                                                                                                                                                          |
| B2.e     | Pick up time                                                                                                                                                                                                               |
| B2.f     | Pick up notes                                                                                                                                                                                                              |
| B2.g     | Drop off notes                                                                                                                                                                                                             |
| B2.h     | Assigned driver                                                                                                                                                                                                            |
| B2.i     | Assigned vehicle                                                                                                                                                                                                           |
| B2.j     | Space Type (e.g., wheelchair, ambulatory)                                                                                                                                                                                  |
| B3       | The Middleware shall maintain a persistent database using a standard data structure for coordinating medical and transportation appointments.                                                                              |

|      |                                                                                                                                                                                         |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| B4   | The Middleware data structure store information under the following categories                                                                                                          |
| B4.a | Customer profile using unique Health Connector ID (no HIPAA sensitive information)                                                                                                      |
| B4.b | Medical Appointment                                                                                                                                                                     |
| B4.c | Transportation Appointment                                                                                                                                                              |
| B4.d | Coordination view                                                                                                                                                                       |
| B5   | The Customer Profile data shall follow the HIRTA Privacy Management Plan                                                                                                                |
| B6   | The Middleware shall implement a translator to convert data received through MOD vendor API into the native data structure format within Middleware.                                    |
| B7   | The middleware webpage shall show the status of scheduled appointments and if transportation has been scheduled in MOD vendor system for the scheduled appointments.                    |
| B8   | If HIRTA is not able to provide transportation for a requested medical appointment, middleware webpage shall alert both HIRTA and healthcare staff.                                     |
| B9   | If medical appointment status changes for a customer in the EHR system, the middleware shall update the webpage to alert HIRTA staff to make changes in the transportation appointment. |
| B10  | The middleware webpage shall use a visual indicator to show a modified medical appointment.                                                                                             |
| B11  | The middleware will monitor the connection status to system endpoints and communicate to development team via email if connection is unable to be validated.                            |

#### **1.1.4 MOD – EHR Read Only Webpage**

##### **1.1.4.1 Function(s):**

The Read-only webpage provides the following functions:

1. *Real-time Information Access:* The read-only webpage will use the data available through the middleware to provide all relevant information on Health Connector transportation related to medical appointments in near real-time to HIRTA staff and healthcare partner staff. The data will be displayed as received by the middleware, however, the frequency is not guaranteed to be continuous. Any confidential or privacy information will be masked/anonymized to comply with the Health Information Portability and Account Act (HIPAA) and Health Connector policy related to Personally Identifiable Information (PII). The MOD-EHR read-only webpage will display information related to the following items requested from the MOD Platform TMS in conjuncture with the EHR API requests described previously.
  - a. *Trip Status:* The MOD Platform TMS will an provide updates on trip status for trips related to medical appointments associated with Health Connector at a configurable interval or on-demand. Trip status will be retrieved via Via Webhooks in real-time as trip status is changed.
  - b. *Trip Booking Confirmation:* The MOD Platform TMS will provide confirmation of a transportation booking related to a medical appointment. Trip status will be retrieved via Via Webhooks in real-time as trip status is changed. Trip booking confirmation will be retrieved via Via Webhooks in real-time as trip requests are assigned vehicles.
  - c. *Trip Booking Change/Cancellation:* The MOD Platform TMS will provide updates on trip booking information if trips are cancelled. Trip bookings that require modification will be rebooked as new trips by Travelers and displayed as new trips. Updated trip bookings,

which are the result of modifications requiring cancellations and rebooking, and cancellations will be retrieved via Via Webhooks in real-time as trip modifications/cancellations are made.

HIRTA Dashboard

Search

Appointments

| Customer     | Appointment Time     | Appointment Location              | Appointment Status | Trip Status   | Pickup Time          | Drop Off Time        | Driver/Vehicle |
|--------------|----------------------|-----------------------------------|--------------------|---------------|----------------------|----------------------|----------------|
| Emilia Jones | 4/27/2024 1:00:00 PM | 174 Pine St, Perry, IA 50220, USA | Booked             | Not Requested | N/A                  | N/A                  | N/A            |
| Ray Chan     | 4/28/2024 6:30:00 PM | 610 West 10th Street, Perry, IA   | Booked             | CONFIRMED     | 4/28/2024 5:04:08 PM | 4/28/2024 6:03:06 PM | N/A            |

ID

Showing 1 to 2 of 2 entries

< 1 >

### **1.1.5 Use Cases**

The following use cases are presented for situations where the MOD-EHR middleware would be used.

#### ***Use Case #1: Customer Calls Healthcare Facility for Transportation Assistance***

In this use case, a customer lacking transportation for an upcoming medical trip calls into a Healthcare Facility Office for assistance in booking transportation to/from their appointment. Designated healthcare staff will have access to the Health Navigator and Healthcare-end Subsystem, which is a limited access version of the MOD Platform TMS, otherwise known as the VOC. This system is provided by Via and allows healthcare staff to book and manage Health Connector rides for customers. Healthcare staff with permissions will be able to log into this system to check if a customer is qualified for Health Connector rides, and if so, book a ride on behalf of the customer that is tied to a medical appointment.

After booking, and prior to the trip, a customer may call the Healthcare Facility Office to check on the status of their requested trip booking. At this time, the healthcare staff will be able to check the MOD-EHR Middleware webpage to see the status of this booking. The webpage will show the status of the booking, including whether a vehicle has been assigned to the rider. As shown in Figure 4, if the healthcare staff member does not see a vehicle assigned to the trip, they will contact a HIRTA CSR, who can then check the HIRTA VOC dashboard to confirm trip booking status. The CSR will then contact the HIRTA scheduler or administrative staff who can perform vehicle assignment, which in turn will update the dashboard. Healthcare staff will then be able to see this update on the middleware webpage and provide the customer with driver and vehicle details.

HIRTA schedulers/administrative staff will be able to review missed trips and no shows for medical appointments using the webpage and can generate a report. Post trip, healthcare staff will also be able to check the middleware webpage for no-show medical appointment information and whether this was due to lack of transportation access.

#### ***Requirements covered by Use Case #1 (including child requirements):***

- B1
- B2
- B3
- B4
- B5
- B6
- B7
- B8
- B9

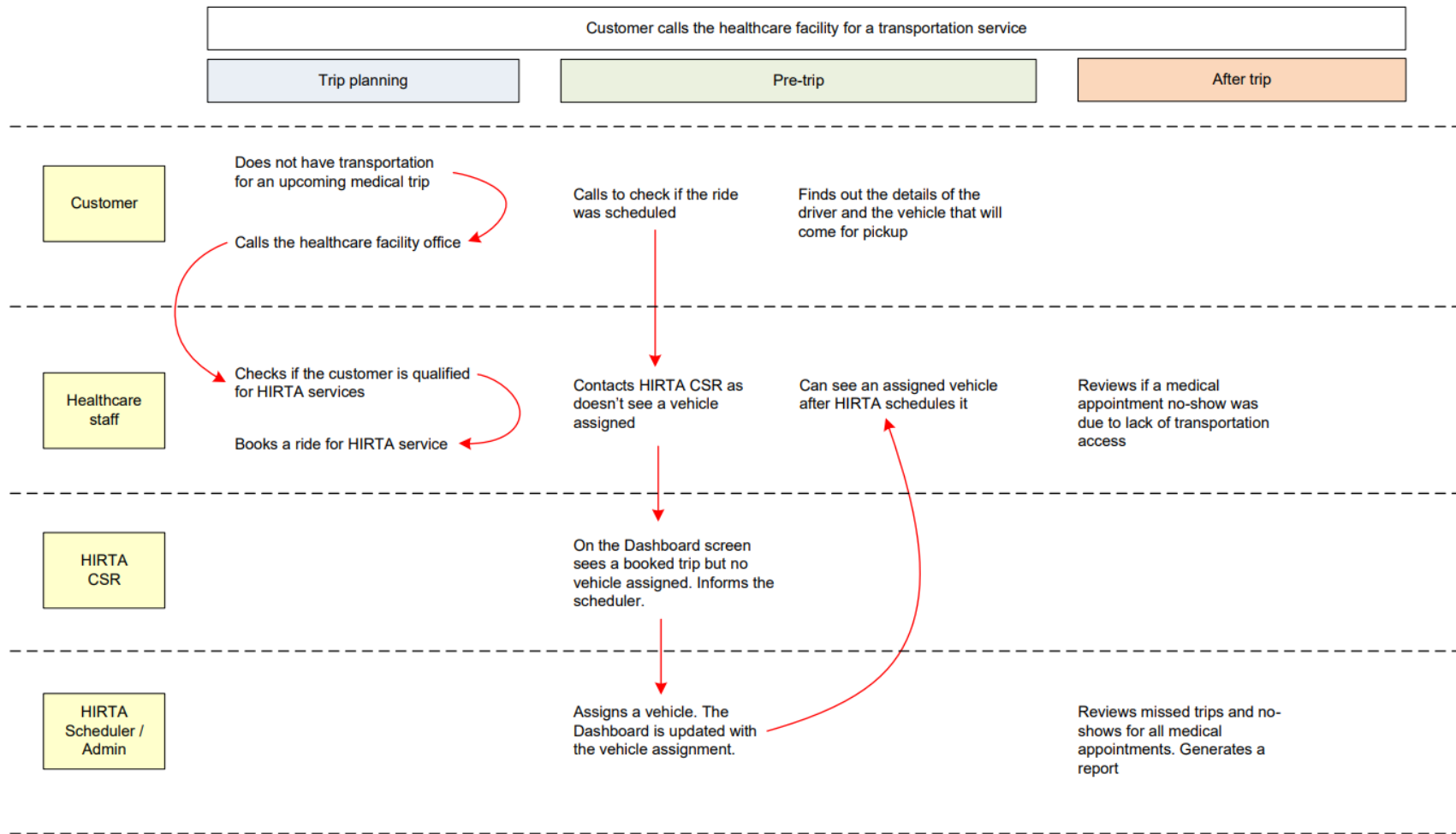


Figure 5. Customer Calls Healthcare Facility for Transportation Assistance (Source: HIRTA Team)

*Use Case #2: Customer Calls HIRTA for Transportation Service and Later Calls Healthcare Facility for Canceling Medical Appointment*

In the use case shown in Figure 6, a customer contacts HIRTA to schedule transportation for a recurring medical appointment. The HIRTA CSR will check the middleware webpage to determine if the customer has a scheduled medical appointment in the upcoming weeks. If so, the CSR will book a Health Connector ride accordingly.

Prior to the trip, the customer contacts the Healthcare Facility Office to cancel a scheduled medical appointment. Healthcare staff will cancel the appointment and contact a HIRTA CSR to cancel the corresponding transportation appointment. At this time, the medical appointment will appear as cancelled on the webpage. Through the VOC, the CSR will then cancel the transportation appointment which will be automatically pushed to the middleware webpage and shown as a cancelled transportation appointment.

*Requirements covered by Use Case #2 (including child requirements):*

- A1
- A2
- B1
- B2
- B3
- B4
- B5
- B6
- B7
- B8
- B9
- B10
- B11

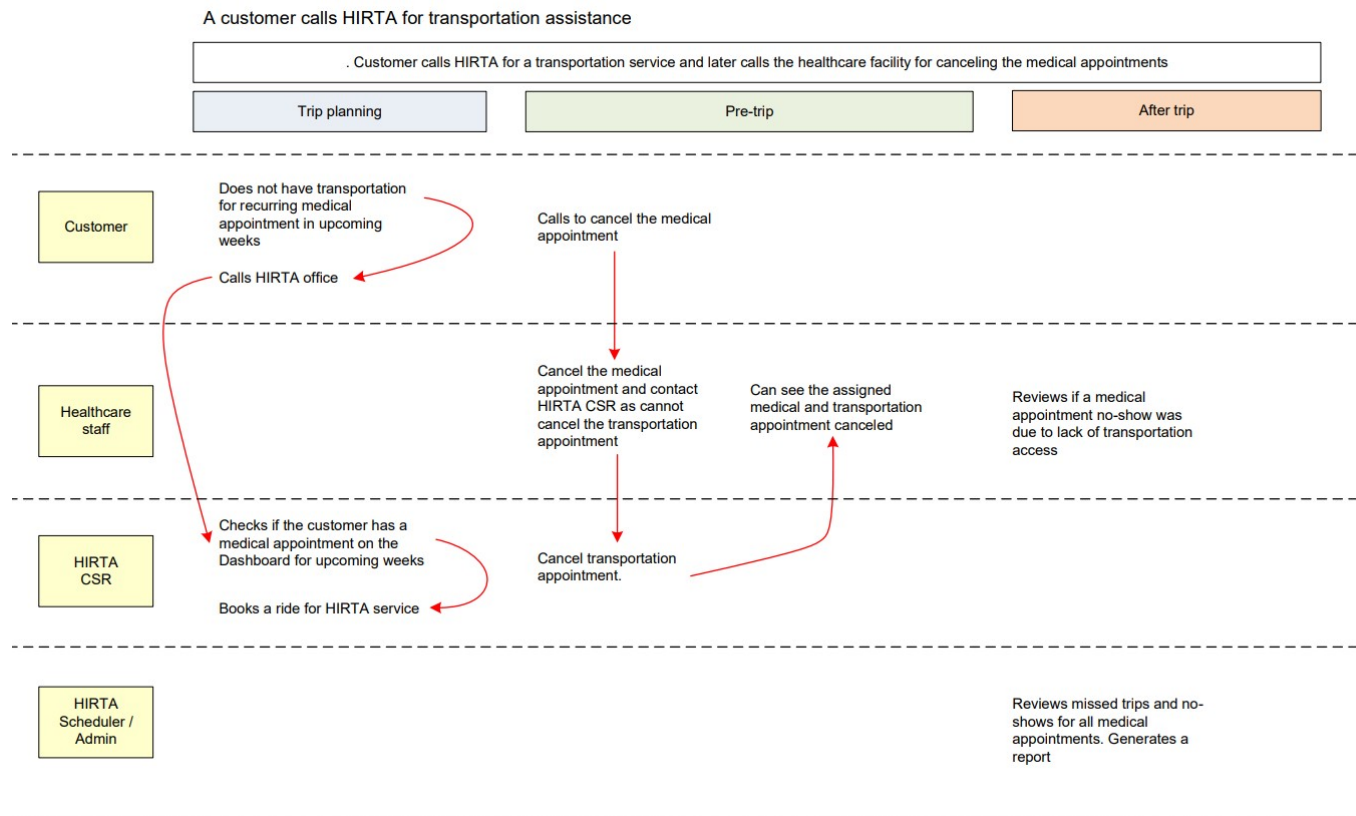


**Figure 6. Customer Calls HIRTA for Transportation Service and Later Calls Healthcare Facility for Canceling Medical Appointments**  
(Source: HIRTA Team)

## 1.2 MOD-Medicaid Middleware

The MOD-Medicaid Middleware is an open-source middleware product that allows data exchange between the MOD Platform TMS and the State of Iowa Medicaid broker system. The Medicaid broker system uses Access2Care, which provides Non-Emergency Medical Transportation (NEMT) services to Medicaid and Medicare members, allowing Medicaid-funded trips through Health Connector for eligible Travelers. The middleware will use the bi-directional APIs provided by Via in the MOD Platform TMS and the Medicaid broker through Access2Care, who's data is accessible via an API provided by Lyft, to implement the data flows described below. A translation engine will be used at both API end points to translate data available from APIs to a standardized data schema to enable the data exchange by the middleware application. A conceptual overview of the MOD-Medicaid Middleware application is shown in Figure 7 below.

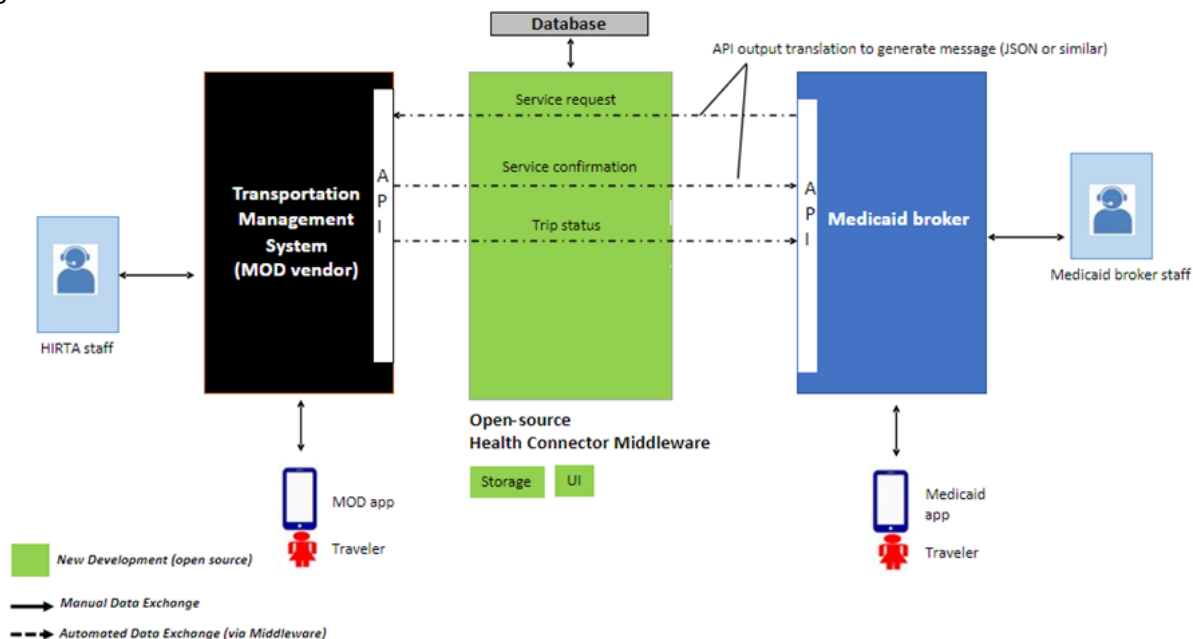


Figure 7. MOD-Medicaid Interface Middleware (Source: HIRTA Team)

### 1.2.1 Medicaid Broker: Access2Care

#### 1.2.1.1 Function(s):

The Medicaid Broker system refers to the State of Iowa Medicaid broker, which uses Access2Care for the following functions:

1. **Medicaid Trip Booking/Management:** Provides a platform to the Medicaid Broker for booking and managing Medicaid trips. Medicaid trips requested by Travelers will continue to be booked through Access2Care. Medicaid trips will be ingested in the HIRTA system when assigned to HIRTA. At that point, a Traveler using Medicaid benefits will be able to use Health Connector Traveler tools.

### 1.2.2 MOD Vendor: Via

HIRTA has selected Via for all scheduling and trip management needs.

### 1.2.3 Interface between Medicaid Broker (Access2Care) and Via.

#### 1.2.3.1 Function(s):

The API facilitates 2 primary functions data exchanges between the MOD-Medicaid Middleware and the Medicaid broker:

1. *Service Request from Medicaid broker:* Allows a Medicaid broker to send a request to the MOD Platform TMS to confirm the availability of a vehicle/driver to meet a trip request.
2. *Service Confirmation from MOD Platform TMS to Medicaid Broker:* Provides a response to a Medicaid Broker message with details of the vehicle type and additional ride information. Medicaid trips will only be booked with credentialed drivers who will be managed by HIRTA.

A unique API key will be used to access Access2Care's API by the middleware.

#### 1.2.3.2 Requirement Traceability:

Table 2 identifies the requirements for the interface between the Medicaid Broker (Access2Care) and Via. The following requirements can also be found in the Requirements Traceability Matrix.

**Table 2. Requirements for Interface between Medicaid Broker (Access2Care) and Via**

| Req. No. | Requirement                                                                                                                                                                                                                                                                                                                                                                                |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A        | Interface with Medicaid Broker (Lyft/ Access 2 Care) API (T-API)                                                                                                                                                                                                                                                                                                                           |
| A1       | <p>The Middleware shall automatically ingest all transportation requests received from a Medicaid broker through an Application Programming Interface (API), per guidance on <a href="https://developer.lyft.com/v1-trip-api/reference/post_tapi-trips">https://developer.lyft.com/v1-trip-api/reference/post_tapi-trips</a>.</p> <p>The T-API API has been developed by Lyft for A2C.</p> |
| A2       | The system shall ingest such records on a pre-defined frequency (e.g., every hour).                                                                                                                                                                                                                                                                                                        |
| A3       | The API shall provide at least the following data                                                                                                                                                                                                                                                                                                                                          |
| A3.a     | Rider ID: Masked/hashed so actual trip ID is not used in the message transmission. Translator is used to encode/decode the message at either ends.                                                                                                                                                                                                                                         |
| A3.b     | Trip ID: Masked/hashed so actual trip ID is not used in the message transmission. Translator is used to encode/decode the message at either ends.                                                                                                                                                                                                                                          |
| A3.c     | Date of trip: Date when the trip will occur                                                                                                                                                                                                                                                                                                                                                |
| A3.d     | Scheduled Pickup Location: Location for pickup                                                                                                                                                                                                                                                                                                                                             |
| A3.e     | Scheduled Pickup Time (optional if dropoff time is included): Time for pickup                                                                                                                                                                                                                                                                                                              |
| A3.f     | Scheduled Dropoff Location: Location for dropoff                                                                                                                                                                                                                                                                                                                                           |
| A3.g     | Scheduled Dropoff Time (optional if pickup time is included): Time for dropoff                                                                                                                                                                                                                                                                                                             |
| A3.h     | Additional Passenger Information: Count of additional passengers                                                                                                                                                                                                                                                                                                                           |
| A4       | The Middleware shall maintain a persistent database using a standard data structure to ingest data from any generic Medicaid broker API.                                                                                                                                                                                                                                                   |

|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A5   | The Middleware application shall provide a translator to convert the data retrieved from Medicaid broker API into the native data structure format of the Middleware application.                                                                                                                                                                                                                                                                                           |
| A6   | The Middleware application shall provide a translator to convert the data retrieved from the Medicaid broker application to a format acceptable to the MOD vendor API for ingesting data into the MOD application.                                                                                                                                                                                                                                                          |
| B    | Interface with MOD Vendor (Via) API                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| B1   | <p>The MOD application shall automatically ingest all Medicaid transportation requests by the Middleware application through an Application Programming Interface (API). Middleware will interface with Via using API per guidance on <a href="https://developer.ridewithvia.com/">https://developer.ridewithvia.com/</a></p> <p>Verified system users of the MOD platform shall be able to do the following within the MOD platform with regard to the Medicaid trips:</p> |
| B1.a | View all Medicaid trip requests.                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| B1.b | Manage Medicaid trip requests (assign drivers and vehicles and update trip status).                                                                                                                                                                                                                                                                                                                                                                                         |
| B2   | The MOD application shall provide a service confirmation message for the trips that are successfully assigned to a driver/vehicle in the system.                                                                                                                                                                                                                                                                                                                            |
| B3   | The service confirmation message shall be delivered to the Middleware application using a standard MOD vendor API that shall contain the following data:                                                                                                                                                                                                                                                                                                                    |
| B3.a | Rider ID: Ideally masked/hashed so actual trip ID is not used in the message transmission. Translator is used to encode/decode the message at either ends.                                                                                                                                                                                                                                                                                                                  |
| B3.b | Trip ID: Ideally masked/hashed so actual trip ID is not used in the message transmission. Translator is used to encode/decode the message at either ends.                                                                                                                                                                                                                                                                                                                   |
| B3.c | Date of trip: Date when the trip will occur                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| B3.d | Scheduled Pickup Location: Location for pickup                                                                                                                                                                                                                                                                                                                                                                                                                              |
| B3.e | Scheduled Pickup Time: Time for pickup                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| B3.f | Scheduled Dropoff Location: Location for dropoff                                                                                                                                                                                                                                                                                                                                                                                                                            |
| B3.g | Scheduled Dropoff Time: Time for dropoff                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| B3.h | Passenger type: Code for type of passenger: traveler, service animal, guest                                                                                                                                                                                                                                                                                                                                                                                                 |
| B3.i | Vehicle Type: Code for type of vehicle                                                                                                                                                                                                                                                                                                                                                                                                                                      |

#### 1.2.3.3 Use Cases

The following use case workflow applies to this middleware product. Relevant requirements covered by each use case are listed below.

- **Use Case #1: Before the day of the trip**
  - Customer books trip with Access2Care (A2C) App
  - A2C brokers trip out to HIRTA as one of their providers. This is done using the middleware product.
  - Via platform ingests the trip using the middleware. In this process Via
    - Receives incoming trip.

- Schedules the trip in the system. No vehicle assigned.
- *Requirements (including children requirements) covered by Use Case #1:*
  - A1
  - A2
  - A3
  - A4
  - A5
  - A6
- **Use Case #2: On the day of the trip**
  - Customer calls Access2Care to find out the status of their trip.
  - A2C doesn't see any vehicle assigned to the trip so contacts HIRTA.
  - HIRTA assigns trip to a vehicle.
  - A2C can see the assigned vehicle confirmation and ETA. Contacts customer to inform about trip details.
  - *Requirements (including children requirements) covered by Use Case #1:*
    - B1
    - B2
    - B3
- **Use Case #3: After trip is complete**
  - HIRTA submits trip performance data as required by A2C.
  - A2C reviews data and reimburses HIRTA for the trip provided.
  - *Requirements (including children requirements) covered by Use Case #1:*
    - B3

## 2 Acronyms & Definitions

### 2.1 Systemwide Acronyms & Definitions

**Table 3. Acronyms & Definitions**

| Term                           | Name                                                  | Description                                                                                                                                                                                                                                                                                                        |
|--------------------------------|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A2C                            | Access2Care                                           | A transportation broker for State of Iowa Medicaid program that performs booking and scheduling and works with service providers such as HIRTA for successful delivery of Medicaid-eligible trips.                                                                                                                 |
| CSR                            | Customer Service Representative                       | Refers to the person who will act as a liaison between HIRTA and Traveler. The CSR will answer questions, and resolve emerging problems that Travelers may face.                                                                                                                                                   |
| EHR                            | Electronic Healthcare Record                          | Refers to the healthcare information management system used by hospitals for patients' healthcare-related appointments, transactions, and records management                                                                                                                                                       |
| HIPAA                          | Health Information Portability and Accountability Act | Provides guidelines for data protection of sensitive patient health information                                                                                                                                                                                                                                    |
| HIRTA                          | Heart of Iowa Regional Transit Agency                 | Rural, regional public transit agency in central Iowa. HIRTA will serve as Proposer/Applicant for the Complete Trip – ITS4US project.                                                                                                                                                                              |
| Healthcare Staff               |                                                       | Staff that is responsible for interacting with customer on check-in and check-out. (e.g., customer care, nursing, community health partnership). Designated staff may book Health Connector rides, and interact with HIRTA, DCHD and other community partners on behalf of patients related to their appointments. |
| Medicaid Transportation Broker |                                                       | Refers to the State of Iowa Medicaid Broker. Currently, Access2Care's system is used for booking and managing Medicaid trips.                                                                                                                                                                                      |
| MOD                            | Mobility-On-Demand                                    | Refers to the ability of individuals to utilize varying transportation modes to make their journeys more efficient or complete                                                                                                                                                                                     |

| Term              | Name                                 | Description                                                                                                                                                                                                     |
|-------------------|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NEMT              | Non-Emergency Medical Transportation | The provision of transportation to patients for medical appointments, lab visits, and other routine care. Generally, used in the context of Medicaid service only.                                              |
| PII               | Personally Identifiable Information  | Refers to any data that can distinguish an individual, either alone or when linked with other available data.                                                                                                   |
| TMS               | Transportation Management System     | Refers to the technologies used to assist customer care and operations staff with Traveler registration, eligibility management, reservations, scheduling, dispatching, billing, and administration activities. |
| Traveler/Customer |                                      | Health Connector users seeking transportation services for their healthcare appointments as part of their pre-trip, during trip, on arrival, and return trip activities.                                        |
| Via               | MOD Vendor                           | MOD vendor providing the MOD Platform TMS.                                                                                                                                                                      |
| VOC               | Via Central Software                 | Central operations software used by HIRTA operations for scheduling, dispatching, ride monitoring and reporting                                                                                                 |

## 2.2 Middleware Data Needs Summary

**Table 4. Middleware Data Needs Summary**

| Data                              | High-level Description                                                                                                                                            | System(s) of Interest Involved |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| Trip status                       | Current information on upcoming trip.                                                                                                                             | MOD Platform TMS               |
| Trip request                      | Traveler request for a trip from a web or mobile device; some Travelers may request over phone and use concierge/ customer care service.                          | MOD Platform TMS               |
| Trip request (partners)           | Trips requested by DCHD and healthcare providers using MOD platform. To be tracked separately to assess the benefit of such capability.                           | MOD Platform TMS               |
| Trip modification or cancellation | Traveler's request to cancel an existing scheduled trip. To modify an existing trip, Travelers will cancel existing reservations and submit new booking requests. | MOD Platform TMS               |
| Trip performance                  | Information as to when a Traveler was picked up and when a ride was completed; also includes no-shows and cancellation events.                                    | MOD Platform TMS               |
| Medical appointment details       | Consists of medical appointment date, time, and location (facility address and doctor's office) for a particular Traveler.                                        | EHR                            |
| Medical appointment status        | Real-time status of progress on a medical appointment resulting in an impact on the pick-up time.                                                                 | EHR                            |
| Medicaid trip requests            | HIRTA-accepted request for Medicaid-funded trips through Medicaid broker platform.                                                                                | Medicaid broker system         |