

Lab Orders Interface

V1.4

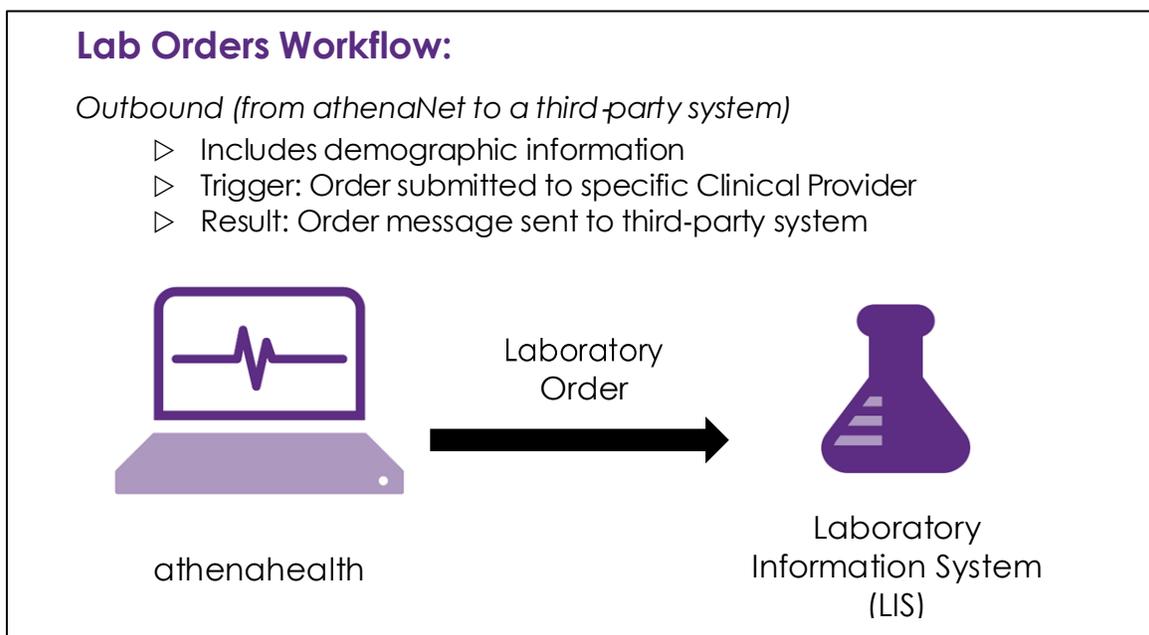
1. Overview

The athenahealth Lab Orders Interface enables clients to send outbound laboratory orders to a third-party application, usually a Laboratory Information System (LIS). To ensure overall success of the interface project, please take time to review the specifications detailed in this document. If you have questions, please contact your athenahealth Account Manager or refer to our data exchange specifications at: <http://www.athenahealth.com/interfaces>.

2. Product Summary

The Lab Orders Interface allows unattended and real-time transfer and processing of interface messages to a remotely-located vendor system via the athenaNet Message Exchange ("MX") Engine. The interface supports transfer of laboratory orders (including data on the patient's demographics and insurances) from athenaNet. The athenaNet MX Engine implements all necessary aspects of message queuing and processing, guaranteeing that transmitted messages will not be lost.

The following sections describe the athenaNet MX engine's capabilities, as well as customer responsibilities including: workflow, maintenance, and infrastructure.



3. Implementation Fees

There are no implementation fees associated with the Lab Orders Interface for Coordinator Receivers. Receivers will continue to follow the orders based pricing model prescribed in the contract signed with athenahealth, paying \$1 for each order received.

4. Connectivity

4.1. Basic Requirements

To ensure reliability and enable continuous monitoring, athenahealth requires a dedicated file transfer connection to deliver a Lab Orders Interface. athenahealth supports FTP (both third-party and athena-hosted), SSH, and VPN connectivity between third-party systems and the athenaNet MX Engine. We prefer the use of VPN with a pre-shared key. Please refer to the athenahealth Interface Connectivity Worksheet for detailed instructions on establishing requisite connectivity:

http://www.athenahealth.com/doc/interfaces/Interface_Connectivity_Worksheet.pdf

5. Message Handling

5.1. Message Formatting

The athenaNet MX Engine parses interface messages according to the HL7 specification (currently, version 2.3.1 is supported; see athenaNet MX Native HL7 Interface Specifications for detailed message specifications).

5.2. Integration Testing Environment

The athenahealth interface team will generate a copy of the client's production instance in athenaNet in our test environment as a dedicated integration-testing platform. We require that the receiver establish a similar test environment to validate interface functionality.

Testing the interface prior to go live is critical. The athenahealth interface team will assist the receiver in executing our comprehensive end-to-end test plan, but athenahealth cannot verify that a third-party LIS is actually processing messages correctly—that is the responsibility of the receiver.

5.3. Order Validation

athenaNet requires ordering providers to enter several required data elements (e.g. specimen), but does NOT validate lab-specific requirements for order types, specimen sources, conditional billing data, or any other requirements.

5.4. Accession Identification

Electronic orders generated in athenaNet are sent as individual ORM messages. For every MSH, there will only be one OBR. Each ORM contains its own unique Order ID—this is the order document ID in athenaNet. A Clinical Encounter ID will also be generated and sent in the ORM message. The same Clinical Encounter ID will be sent for every order placed in the order group/encounter. The Clinical Encounter ID should be used by the Lab to accession the orders received. It should also be noted that if multiple specimens are collected within the same order group, the requisition will not be automatically split. All orders within an order group, no matter what specimen they apply to, will be printed on the same requisition. The only way requisitions can be split is if the user manually identifies which tests should be printed on the requisition.

Example: Dr. Smith is placing an order for three different lab tests for one of his patients. Within that same order group/encounter, he places an order for a CBC, TSH, and a BMP. Each of those tests is sent as separate ORM messages. Each message will contain its own unique Order ID, along with a Clinical Encounter ID. The Clinical Encounter ID will be the same for each of those tests and is what can be used by the lab to accession the orders. The Clinical Encounter ID will be printed on the paper requisition, which will contain all three of the tests.

5.5. Specimen Source Documentation

athenaNet supports identification of specimen source during the ordering process. Specimen source is standardized across both ordering providers and receiving facilities; it is not possible to limit or customize athenaNet's list of specimens (e.g., customize by order type or receiving facility).

5.6. Compendium Configuration

athenaNet maintains a global compendium of Clinical Order Types (COTs) across all athenaClinicals practices that cannot be customized or modified. Ordering providers select tests by choosing an athenaNet COT.

The receiving facility's order codes are called Clinical Provider Order Types (CPOTs) and must be mapped to athenaNet order types to ensure that (1) the MX Engine sends the receiver's electronic order code in outbound messages, and (2) ordering providers can distinguish available tests from tests that the receiver does not perform.

athenaNet helps ordering providers identify available, mapped tests for a specific receiving facility by bolding the receiving facility's order types in athenaNet's order entry system.

If an athenaNet user submits an order for a test that is not bolded (unavailable/unmapped test), the MX Engine will send the order code "MISC" and the plaintext name of the relevant athenaNet order type (e.g., "CBC w/ Auto-Diff").

5.6.1. Send-Out Orders

athenaNet does not differentiate between send-out orders and locally-performed orders, and the MX Engine cannot send different order codes on a site-specific basis. The receiving facility's LIS bears the responsibility to normalize order and result codes for send-out tests (if applicable).

5.7. Ask-at-Order-Entry (AOE) Questions

athenahealth maintains a global table of AOE (Ask at Order Entry questions). athenahealth will work with the receiver to map the receiving facility's AOE dataset to athena's AOE dataset. Athena does not standardly load receiver-specific AOE but will attempt to map the receiving facility's AOE and associate them with the relative test codes.

5.8. Outbound Message Processing

5.8.1. Overview

The Lab Orders Interface generates an outbound message when an associated application trigger is activated in athenaNet. The MX Engine compiles and sends a separate interface message for each individual test ordered in athenaNet (i.e., there is no order batching or accession-level grouping of orders).

The receiver bears the responsibility to associate athenaNet-generated orders with LIS-defined specimens or accessions.

5.8.2. Sample Messages and Specifications

Sample messages for the Lab Orders Interface are available on our interface website (<http://www.athenahealth.com/cmp/interfaces/athenetwork-interfaces>) under "Support Documents."

5.8.3. ICD-10 Compatibility (ORM)

If the client creates an order in athenaNet using the ICD-9 code set, the MX Engine will include ICD-9 diagnoses in the DG-1 segment in outbound order messages:

- Order with a diagnosis: DG1 | |ICD9 | 123 | TEST |

After a client practice converts to using the ICD-10 code set, the MX Engine will include an ICD-9/10 identifier:

- Only ICD-9 code present – DG1 | |ICD9 | 123^TEST^I9 | TEST |
- Only ICD-10 code present – DG1 | |ICD10 | 123^TEST^I10 | TEST |
- Both ICD-9 and ICD-10 codes present – DG1 | |ICD9 | 123^TEST^I9^123^TEST^I10 | TEST |

5.8.4. Outbound Message Triggers

The Lab Orders Interface can be configured to send electronic orders either immediately upon provider submission (this is the default trigger) or after manual review for further validation by clinical staff.

5.8.5. Practice & Provider Identification

By default, the MX Engine will identify the ordering practice by sending the practice's athenaNet Context ID and name in MSH-4. Alternatively, the lab orders interface can be configured to use a third-party, practice-level identifier such as a lab account number. The MX Engine will also include the NPI number and name of the ordering provider in each message.

5.8.6. Ordering Workflows

5.8.6.1. Cancelled Orders

The MX Engine does not support electronic cancellation or update of submitted orders. To cancel an order once it has been submitted by the interface, the ordering provider should delete the order document in athenaNet and place a phone call to the receiving facility to request an order cancellation.

5.8.6.2. Orders Scheduled in Advance

athenaNet supports the advance scheduling of orders. The MX Engine will hold an order in a PEND status until the date the order is scheduled to be performed, at which time the order will be submitted electronically. Users can manually "awaken" an order by altering its submission date. Note: orders that "wake" overnight during athenaNet's interface maintenance window will be sent via fax the following morning.

5.8.6.3. Standing Orders

athenaNet supports the scheduling of standing orders. Standing orders will generate an order message for each instance of the recurrence; the first message will submit on the date the series begins, and subsequent orders will submit as they become active (generally early morning on the date to be performed).

If a patient arrives early for a draw to fill a standing order, the receiving facility should request the additional instance from the practice. A practice user can force electronic transmission of a standing order earlier than scheduled by applying the "wake" action to the order's next instance.

Standing orders that have already been submitted electronically cannot be cancelled electronically. To cancel an order once it has been submitted by the interface, the ordering provider should delete the order document in athenaNet and place a phone call to the receiving facility to request an order cancellation.

5.8.6.4. Add-On Tests

The MX Engine supports the submission of add-on tests. If the ordering provider indicates that the order is being added on to an existing specimen/requisition, the MX Engine will provide that information in OBR-11. The full list of possible values in OBR-11 is:

- L = Lab will collect specimen
- O = Practice will send specimen
- A = Add-on test

6. Project Plan

| Project Phase | athena Action Items | Receiver Action Items |
|--------------------------------|--|--|
| Project Kickoff | <ul style="list-style-type: none"> Review Implementation Guide Establish communication plan | <ul style="list-style-type: none"> Identify interface project team |
| Begin Interface Implementation | <ul style="list-style-type: none"> Begin mapping compendium Initiate build process with development team Complete test plan | <ul style="list-style-type: none"> Review, map, and provide feedback on the current compendium Identify any discrepancies between specifications |
| Interface Build | <ul style="list-style-type: none"> Initiate build process with development team | <ul style="list-style-type: none"> Address any required modifications |
| Testing | <ul style="list-style-type: none"> Complete test plan | <ul style="list-style-type: none"> Review athena's test plan/provide test plan |
| Review | <ul style="list-style-type: none"> Complete any necessary modifications discovered during testing | <ul style="list-style-type: none"> Review athena test orders and provide feedback Surface outstanding questions/issues concerning the interface or test mappings |
| Training | <ul style="list-style-type: none"> Initiate training process with beta client | <ul style="list-style-type: none"> Assist in beta client training |
| Go-Live | <ul style="list-style-type: none"> Schedule go live call with beta client and lab | <ul style="list-style-type: none"> Address any client questions that arise following go live |

7. Interface Maintenance and Support

athenahealth provides post go-live maintenance and support for all Lab Orders Interfaces. Interface maintenance does not include development of any additional interface functionality to the interface, which should be scoped and priced separately.

Interface maintenance includes physical monitoring (success/failure of message transfers), and standard troubleshooting via the athenahealth Client Solution Center (CSC). athenahealth will ensure backwards compatibility during any subsequent athenahealth code releases, and will troubleshoot and repair reproducible software errors that are related to the athenahealth side of the interface.

Interface maintenance does not include modifications that become necessary due to changes on the remote (non-athenahealth) side of the interface.

Client staff who require support should contact the CSC. athenahealth will generally begin troubleshooting on interfaces reported as "down" within two hours (typically sooner during business hours). Response time will be longer if the client does not contact the CSC.

7.1. Compendium Management

athenaClinicals clients should request mapping of new orderable tests by logging a support case with the CSC. Response time to new order type mapping is 10 business days; please plan accordingly. Coordinator Core clients can maintain their CPOT mappings using the athenaNet Coordinator Receiver portal.

8. Scheduled Downtime

The athenaNet MX engine is subject to the same maintenance windows as the general athenaNet application. Currently, 1:00 - 4:00 am Eastern Time is reserved for maintenance. By default, all interfaces are shut off during this time, and remain disabled until 6:00 am Eastern Time.