



LimitLIS®

# HL7 Troubleshooting Manual - v3.1

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## **ABOUT THIS DOCUMENT**

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### **Purpose of this Document**

LimitLIS® v3.1 HL7 Troubleshooting Manual is intended to provide guidance to laboratory managers and system administrators in the detection and correction of HL7 integration and usage issues within LimitLIS®.

### **Prerequisites**

A User should belong to the “Lab Managers”, “Lab Admins”, or “RURO Admins” User Group. Users should be comfortable with the use of HL7 format files (ORU, ORM, DFT, and ADT) and ASTM/JSON format data files.

### **Intended Audience**

This manual is intended for the following personnel:

- Laboratory Administrators
- Laboratory Managers
- System Administrators

## **GENERAL PREVENTION**

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Minimize the number of anomalies through rigorous development practices, strong coding practices, frequent testing, repeatable deployment, and a well-defined source code control process.

To reduce the common causes of errors, we strongly recommend following the LimitLIS® HL7 Specification Requirements (available upon request), which is based on the HL7 International Standard for electronic data exchange in healthcare environments.

The LimitLIS® HL7 Specification Requirements document describes how HL7 is integrated into the LimitLIS® system and explains in detail the message structures, fields that will be used within each of the segments, and nature of the data each field contains. If the HL7 message does not meet the requirements, data transmission may result in processing issues.



## TROUBLESHOOTING HL7 INTEGRATION AND USAGE

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### HL7 Order (ORM\_O01) Message

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Each time a sending application transmits an EHR Order to LimitLIS® through an ORM file, a new **EHR Order** (EHO) record is created in the system. This record contains data associated with the ORM Message, including error and debugging information, in the “Comments” field.

To troubleshoot problems with an EHR Order message, refer to the particular EHR Order record by navigating to the “**View Automated Orders**” quick link, located on the left side of the home screen, or to **Explorer > Logs & Messages > EHR Orders**.

#### EHR Order record contains the following entities:

- **EHR Server Configuration** – displays the configured EHR Server Name associated with the sending Facility. Commonly, this is HL7 Provider/Vendor Name.
- **External Source ID** – unique Placer Order Number (from ORC.2).
- **Requisition** – Requisition ID created in the LimitLIS® system from the EHR Order. If no linked Requisition is present, indicates a problem processing the order.
- **Patient** – existing in the system or newly created from the Order patient. If no linked Patient is present, indicates a problem processing the order.
- **File** – HL7 Order file containing the transmitted information between systems. Can be downloaded.
- **Comments** – contains error/warning messages and debugging information related to the EHR Order. The absence of comments indicates successful processing of the Order.
- **Creation Date** – date and time of the EHR Order record creation in the LimitLIS® system.

### Meaning of Error Messages

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Error messages show critical problems the application encountered during Order processing.

The tables below show the most common errors in the LimitLIS® system along with their cause and resolution.

If the data transmission identifies a processing problem that is not specified in this document, please bring this fact to the attention of RURO Support at [support@ruro.com](mailto:support@ruro.com).



**Placer Order Number field of ORC segment should not be blank. Order <External Source ID> rejected.**

**Following fields on a Requisition <Requisition ID> are required and cannot be blank: Specimen Types**

**Following fields on a Patient <Patient Name and MRN> are required and cannot be blank: First Name, Last Name, DOB, Sex, Address, Phone Number**

**Could Not Find Requesting Physician no NPI Provided.**

<b>Problem</b>	LimitLIS® system requirements were not met.
<b>Cause</b>	<p>LimitLIS® system validates the presence of required data in the EHR Order.</p> <p>Error messages listed above report that the EHR Order does not contain the specified required data.</p> <p>There are a number of required fields for each segment in the EHR Order, such as Facility Name, Patient information (Last and First Name, DOB, Sex, Address, Phone Number), Physician NPI, Specimen Type, Financial Class, External Source ID, Collection Date, Test/Test Panel code, etc.</p> <p>For example, Specimen Type code is required and should be located in the ORC.15 field of the HL7 file.</p>
<b>Solution</b>	<ol style="list-style-type: none"> <li>1. Refer to the “LimitLIS® HL7 Specification Requirements” document, where all required fields are specified.</li> <li>2. In the document, find the value specified in the error message and the corresponding field number required in ORM messages. For example, the required field for Specimen Type is ORC.15.</li> <li>3. Inform the Provider/Vendor of the need to send the EHR Order with certain data in particular field.</li> <li>4. After receiving an updated Order, a new record will appear with the same External Source ID in the EHR Orders list, and a requisition will be created.</li> </ol>

**Could Not Find Requesting Physician by NPI <NPI Number>**

**Could Not Find Test Code <Test Code>**

**Could Not Find Specimen Type <Specimen Type>**

<b>Problem</b>	LimitLIS® system requirements were not met. The record does not exist in the system
<b>Cause</b>	<p>LimitLIS® validates the presence of required values in the EHR Order and checks the compatibility of values in the system.</p> <p>Error messages listed above report that the EHR Order contains the specified value that does not exist in the system.</p>



	<p>There are a number of required fields for each segment in the EHR Order that must exist in the system, such as Facility, Physician NPI, Test/Test Panel code, Diagnosis code, Specimen Type, etc. For example, Physician, which is identified by NPI number located in the ORC.12.1 field, is required and must exist in the system.</p>
<p><b>Solution</b></p>	<ol style="list-style-type: none"> <li>1. Make sure the field specified in the error message record exists in the LimitLIS® system. <b>For example</b>, make sure the Physician with specified NPI exists in the system (can be found under <b>Physicians</b> Quick Link).</li> <li>2. Confirm with the Client and create the corresponding record if it does not exist.</li> <li>3. From the “View Automated Orders” list, select the failed Order and click on “Reprocess Order File” tool on the right.</li> <li>4. The EHR Order record will be updated, and a requisition will be created.</li> </ol>

### Could Not Find Facility <value in the MSH.4 field>

<p><b>Problem</b></p>	<p>LimitLIS® system requirements were not met.</p>
<p><b>Cause</b></p>	<p>LimitLIS® validates the presence of required values in the EHR Order and checks the compatibility of values in the system.  The name of the Facility is required in the MSH.4 field of the ORM message and must match a Facility Name within the LimitLIS® system. Often, EHR Providers/Vendors place the Facility ID (Facility EHR Account) to this field, and that causes the error.</p>
<p><b>Solution</b></p>	<p>Make sure the Facility specified in the error message exists in the LimitLIS® system (can be found under <b>Clients/Facilities</b> Quick Link).</p> <p>There are two possible solutions: <b>If Facility Name is incorrect in the EHR Order:</b></p> <ol style="list-style-type: none"> <li>1. Inform the Provider/Vendor of the need to send the EHR Order with the correct Facility Name in the MSH.4 field.</li> <li>2. After receiving an updated Order, a new record will appear with the same External Source ID in the EHR Orders list, and a requisition will be created.</li> </ol> <p><b>If Facility Name is incorrect in the system (or does not exist):</b></p> <ol style="list-style-type: none"> <li>1. If the Facility Name needs to be updated with the system, please contact RURO Support (<a href="mailto:support@uro.com">support@uro.com</a>) for assistance.</li> <li>2. If the Facility does not exist in the system, use the <b>Clients/Facilities</b> Quick Link to create a new Facility record.</li> <li>3. After the appropriate change is completed, return to the “View Automated Orders” list, select the failed Order, and click on “Reprocess Order File” button on the right.</li> <li>4. The EHR Order record will be updated, and a requisition will be created.</li> </ol>

### Could Not Find Patient by id <External Source ID>

<p><b>Problem</b></p>	<p>LimitLIS® system requirements were not met.</p>
<p><b>Cause</b></p>	<p>LimitLIS® validates the presence of required values in the EHR Order and checks the compatibility of values in the system.  This error occurs only when the function “Create Patient” is disabled in the HL7 Server Configurations, and the Patient with External Source ID specified in the error message does not exist in the system. Otherwise, a new patient will be created from the Order.</p>





	<p>External Source ID is required and should be located in any of the following fields of the hl7 file:</p> <ul style="list-style-type: none"> <li>• PID.3 (preferred field)</li> <li>• PID.2 (used if PID.3 field is empty)</li> <li>• PID.4 (used if PID.2 and PID.3 fields are empty).</li> </ul>
<p style="text-align: center;"><b>Solution</b></p>	<p>There are two possible solutions:</p> <ol style="list-style-type: none"> <li>1. Inform the Provider/Vendor of the need to send the EHR Order with the Patient External Source ID from a Patient record already within the LimitLIS® system.</li> <li>2. After receiving an updated Order, a new record will appear with the same External Source ID in the EHR Orders list and a requisition will be created.</li> </ol> <p><b>OR:</b></p> <ol style="list-style-type: none"> <li>1. Open the EHR Order record (EHO) and note the EHR Server Configuration Name.</li> <li>2. From the quick links panel, open “LIS System Settings” and click on “Manage HL7 Configurations” button on the right. Select the HL7 Server Configuration specified in Step 1 and click on “Edit” button.</li> <li>3. Check the box “Create Patient” and click OK.</li> <li>4. From the “View Automated Orders” list, select the failed Order and click on “Reprocess Order File” tool on the right.</li> <li>5. The EHR Order record will be updated, and a requisition will be created.</li> </ol>

**Could Not Find Patient with id <Patient External Source ID> and Date of Birth of <Date of Birth>**

<p style="text-align: center;"><b>Problem</b></p>	<p>LimitLIS® system requirements were not met. Values are incompatible.</p>
<p style="text-align: center;"><b>Cause</b></p>	<p>LimitLIS® checks the compatibility of values in the system.</p> <p>The Patient is identified by unique External Source ID located in any of the following fields of the HL7 file:</p> <ul style="list-style-type: none"> <li>• PID.3 (preferred field)</li> <li>• PID.2 (used if PID.3 field is empty)</li> <li>• PID.4 (used if PID.2 and PID.3 fields are empty).</li> </ul> <p>In addition to the External Source ID, the Patient is identified by date of birth (DOB).</p> <p><b>In this case</b>, the Patient with the External Source ID specified in the error message exists in the system, but the date of birth on his record does not match the date of birth in the EHR Order. Therefore, the date of birth is incorrect either in the system or in the EHR Order.</p>
<p style="text-align: center;"><b>Solution</b></p>	<p>There are two possible solutions:</p> <p><b>If DOB is incorrect in the EHR Order:</b></p> <ol style="list-style-type: none"> <li>1. Inform the Provider/Vendor of the need to send the EHR Order with the correct DOB.</li> <li>2. After receiving an updated Order, a new record will appear with the same External Source ID in the EHR Orders list, and a requisition will be created</li> </ol> <p><b>If DOB is incorrect in the system:</b></p> <ol style="list-style-type: none"> <li>1. From the Patient details page, click the “Edit” button and update the DOB.</li> <li>2. From the “View Automated Orders” list, select the failed Order and click the “Reprocess Order File” button on the right.</li> <li>3. The EHR Order record will be updated, and a requisition will be created.</li> </ol>





**Specimen Types (<Specimen Type>) of ‘<Test or Panel name>’ test are incompatible with Specimen Types () of ‘<Requisition ID>’ requisition**

<b>Problem</b>	LimitLIS® system requirements were not met. Values are incompatible.
<b>Cause</b>	<p>LimitLIS® checks the compatibility of values in the system.</p> <p>Specimen Type is identified by Code or Name located in the OBR.15 field of the HL7 file and must match the Specimen Type associated with the Test/Test Panel in the system.</p> <p>This error reports that Specimen Type in the EHR Order does not match the Specimen Type(s) associated with the Test/Test Panel in the system. Therefore, the Specimen Type is incorrect either in the system or in the EHR Order.</p>
<b>Solution</b>	<p>There are two possible solutions:</p> <p><b>If the Specimen Type is incorrect in the EHR Order:</b></p> <ol style="list-style-type: none"> <li>1. Inform the Provider/Vendor of the need to send the EHR Order with the correct Specimen Type in the OBR.15 field.</li> <li>2. After receiving an updated Order, a new record will appear with the same External Source ID in the EHR Orders list, and a requisition will be created.</li> </ol> <p><b>If the Specimen Type is incorrect in the system:</b></p> <ol style="list-style-type: none"> <li>1. Click on “Test Packages” Quick Link and find the specified Test or Test Panel (“Manage Test Panels”) in the error message. Click on “Edit” button and change the Specimen Type. You will need to perform the same for associated Analyte(s) if it is specified. <b>Note:</b> If a Test Panel is ordered, you will need to change the Specimen Type for all associated Tests and Analytes.</li> <li>2. From the “View Automated Orders” list, select the failed Order and click on “Reprocess Order File” button on the right.</li> <li>3. The EHR Order record will be updated, and a requisition will be created.</li> </ol>

**No insurance segment found in HL7 file**

<b>Problem</b>	The inconsistency of values/segments in the EHR Order
<b>Cause</b>	<p>LimitLIS® validates the presence of required values and segments in the EHR Order and checks the compatibility of values in the system.</p> <p>If Financial Class specified in the PV1.20 field is “Insurance” or “Medicare”, the IN1 segment with Insurance Company information is required.</p> <p>The error message reports that IN1 segment is not present in the EHR Order.</p>
<b>Solution</b>	<p>There are two possible solutions:</p> <ol style="list-style-type: none"> <li>1. Inform the Provider/Vendor of the need to send the EHR Order with the IN1 segment and required insurance information in it.</li> </ol> <p><b>OR</b></p> <ol style="list-style-type: none"> <li>1. Inform the Provider/Vendor of the need to send the EHR Order with another code in the PV1.20 field (Patient/Self Pay or Facility).</li> <li>2. After receiving an updated Order, a new record will appear with the same External Source ID, in the EHR Orders list, and a requisition will be created.</li> </ol>

**Could Not Find Insurance Company <Insurance Company Name>**

<b>Problem</b>	LimitLIS® system requirements were not met.
<b>Cause</b>	<p>LimitLIS® system validates the presence of required values in the EHR Order.</p> <p>The Insurance Company is identified by Insurance Company Name located in the IN1.4 field of the HL7 file, is required and must exist in the system if the “Create Insurance From Order” function located in the HL7 Server Configuration is disabled.</p> <p>In this case, the function “Create Insurance From Order” is disabled and the Insurance Company Name specified in the error message does not exist in the system.</p> <p><b>Note:</b> This error occurs only if “Create Insurance From Order” is disabled; otherwise, a new Insurance Company record will be created.</p>
<b>Solution</b>	<p>There are two possible solutions:</p> <ol style="list-style-type: none"> <li>1. Inform the Provider/Vendor of the need to send the EHR Order with an existing Insurance Company in the LimitLIS® system.</li> <li>2. After receiving an updated Order, a new record will appear with the same External Source ID in the EHR Orders list.</li> </ol> <p><b>OR:</b></p> <ol style="list-style-type: none"> <li>1. Open EHR Order record (EHO) and note the Name of the EHR Server Configuration.</li> <li>2. From the quick links panel, open “LIS System Settings” and click the “Manage HL7 Configurations” button on the right. Select the HL7 Server Configuration specified in Step 1 and click on “Edit” tool.</li> <li>3. Check the box “Create Insurance From Order” and click OK.</li> <li>4. From the “View Automated Orders” list, select the failed Order and click on “Reprocess Order File” tool on the right.</li> <li>5. The EHR Order record will be updated, and a requisition will be created.</li> </ol>

**"Insurance Company 1" is required when "Bill To" is Insurance**

**You have Insurance Company 1 selected. You must also provide Policy #1.**

**"Relation To Insured" is required when "Bill To" is Insurance**

<b>Problem</b>	LimitLIS® system requirements were not met.
<b>Cause</b>	<p>LimitLIS® system validates the presence of required values in the EHR Order. Error messages listed above report that the EHR Order does not contain the specified required data when Financial Class is “Insurance” or “Medicare”.</p> <p>When Financial Class is “Insurance” or “Medicare”, there are a number of required fields for the IN1 segment in the EHR Order, such as Insurance Company Name, Policy Number (Patient’s Insurance Co Policy Number/Member ID), and Relation To Insured (Insured's Relationship to Patient).</p>
<b>Solution</b>	<ol style="list-style-type: none"> <li>1. Refer to the “LimitLIS® HL7 Specification Requirements” document, where all required fields for the IN1 segment are specified.</li> <li>2. In the document, find the value specified in the error message and the corresponding field number required in the ORM message. For example, the required field for Insurance Company Name is IN1.4.</li> </ol>



	<ol style="list-style-type: none"> <li>3. Inform the Provider/Vendor of the need to send the EHR Order with certain data in particular field.</li> <li>4. After receiving an updated Order, a new record will appear with the same External Source ID in the EHR Orders list, and a requisition will be created.</li> </ol>
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**Following fields on an Insurance Company <Insurance Company Name> are required and cannot be blank: Payer ID**

<b>Problem</b>	LimitLIS® system requirements were not met.
<b>Cause</b>	<p>LimitLIS® validates the presence of required values in the EHR Order and checks the compatibility of values in the system.</p> <p>This error occurs only when the Financial class is “Insurance” or “Medicare”, the function “Create Insurance From Order” is enabled in the HL7 Server Configurations, and the Insurance Company specified in the error message does not exist in the system.</p> <p>Payer ID is a required value for creating Insurance Company in the system and should be located in the IN1.3 field of the HL7 file.</p>
<b>Solution</b>	<ol style="list-style-type: none"> <li>1. Inform the Provider/Vendor of the need to send the EHR Order with the Payer ID in the IN1.3 field.</li> <li>2. After receiving an updated Order, a new record will appear with the same External Source ID in the EHR Orders list, and a requisition will be created.</li> </ol>

**Child Name is required**

**Other Name is required**

<b>Problem</b>	LimitLIS® system requirements were not met.
<b>Cause</b>	<p>LimitLIS® system validates the presence of required values in the EHR Order.</p> <p>Error messages listed above report that the EHR Order does not contain the specified required data.</p> <p>Guarantor Name (Name of Insured/Subscriber Name) is a required value if the Financial class is “Insurance” or “Medicare”, and Insured's Relationship to Patient (Relation To Insured) is “Spouse”, “Child”, or “Other”.</p> <p>The Guarantor Name should be located in the IN1.16 or/and GT1.3 field of the HL7 file.</p>
<b>Solution</b>	<ol style="list-style-type: none"> <li>1. Inform the Provider/Vendor of the need to send the EHR Order with the Guarantor Name in the IN1.16 and/or GT1.3 field.</li> <li>2. After receiving an updated Order, a new record will appear with the same External Source ID in the EHR Orders list, and a requisition will be created.</li> </ol>

**Billing Facility: Expected LIMS Subject**

<b>Problem</b>	LimitLIS® system requirements were not met.
<b>Cause</b>	LimitLIS® system recognizes the Financial Class by the absence of certain segments and validates the presence of required values in the EHR Order.



	<p>In this case, the EHR Order does not have the PV1 and IN1 segments but has the GT1 segment. The system analyzes the Financial Class as “Facility”.</p> <p><b>Note:</b> The system also recognizes Financial Class "Patient/Self Pay" by the absence of the IN1 and GT1 segments in the EHR Order.</p> <p>When Financial Class is “Facility”, Billing Facility Name (GT1.3) and Billing Facility Address (GT1.5) are required fields for the GT1 segment in the EHR Order.</p>
<p><b>Solution</b></p>	<ol style="list-style-type: none"> <li>1. Inform the Provider/Vendor of the need to send the EHR Order with certain data in particular field. The required field for Billing Facility Name is GT1.3 and for Billing Facility Address is GT1.5, in ORM messages.</li> <li>2. After receiving an updated Order, a new record will appear with the same External Source ID in the EHR Orders list, and a requisition will be created.</li> </ol>

**"Billing Facility" is required when "Bill To" is Facility**

**"Billing Facility Address" is required when "Bill To" is Facility**

<p><b>Problem</b></p>	<p>LimitLIS® system requirements were not met.</p>
<p><b>Cause</b></p>	<p>LimitLIS® system validates the presence of required values in the EHR Order.</p> <p>Error messages listed above report that the EHR Order does not contain the specified required data when Financial Class is “Facility”.</p> <p>When Financial Class is “Facility”, Billing Facility Name (GT1.3) and Billing Facility Address (GT1.5) are required fields for the GT1 segment in the EHR Order.</p>
<p><b>Solution</b></p>	<ol style="list-style-type: none"> <li>1. Inform the Provider/Vendor of the need to send the EHR Order with certain data in particular field. The required field for Billing Facility Name is GT1.3 and for Billing Facility Address is GT1.5, in the ORM messages.</li> <li>2. After receiving an updated Order, a new record will appear with the same External Source ID, in the EHR Orders list, and a requisition will be created.</li> </ol>

**There is an existing requisition for <Patient Name> collected on <Collection Date>**

<p><b>Problem</b></p>	<p>LimitLIS® system requirements were not met.</p>
<p><b>Cause</b></p>	<p>According to the Client’s requirement, the system prevents more than one requisition with the same collection date and the same patient from being created/submitted.</p> <p>The requisition for the Patient with the collection date specified in the error message already exists in the system.</p>
<p><b>Solution</b></p>	<ol style="list-style-type: none"> <li>1. Inform the Provider/Vendor of the need to check the Collection date in the EHR Order and, if possible, to send the Order with the updated date.</li> <li>2. After receiving an updated Order, a new record will appear with the same External Source ID in the EHR Orders list, and a requisition will be created.</li> </ol>



**Requisition <External Source ID> already exists in the system. Requisition will not be updated, and the Order will be skipped.**

<b>Problem</b>	LimitLIS® system requirements were not met.
<b>Cause</b>	The system prevents more than one requisition with the same External Source ID from being created/submitted if an existing requisition is not in the “Submitted” state.  <b>Note:</b> If existing in the system requisition is in “Submitted” state, there will be a warning notification “Requisition <External Source ID> already exists in the system in the following state: ["Submitted"]. Updating Requisition information with import.” In this case, the requisition will be updated; no additional actions required.
<b>Solution</b>	<ol style="list-style-type: none"> <li>1. Inform the Provider/Vendor of the need to check the External Source ID in the EHR Order and, if possible, to send the Order with the updated data.</li> <li>2. After receiving an updated Order, a new record will appear with the same External Source ID, in the EHR Orders list, and a requisition will be created.</li> </ol>

**Insurance Company address: <address>, is not valid.**

**Address <address> is not valid. <br>Please enter valid US postal address.**

<b>Problem</b>	LimitLIS® system requirements were not met.
<b>Cause</b>	According to the HL7 Standard, all address values should be in the <a href="#">XAD</a> format: Address 1^Address 2^City^State^Zip  LimitLIS® system validates all fields containing an address and rejects the invalid ones. There are a number of address fields in the EHR Order, such as Patient, Guarantor, Billing Facility, and Insurance Company addresses. The error message may indicate a specific field.
<b>Solution</b>	<ol style="list-style-type: none"> <li>1. Download the HL7 file from EHR Order (EHO) details page. In the file, find the invalid value specified in the error message (for example, “fgdfgdfg,”) and write down the segment and the field number (e.g. IN1.5).</li> <li>2. Inform the Provider/Vendor of the need to send the EHR Order with the correct <a href="#">XAD</a> format of the address in the specific field.</li> <li>3. After receiving an updated Order, a new record will appear with the same External Source ID in the EHR Orders list, and a requisition will be created.</li> </ol>

**Collection Date: invalid date**

**Invalid date**

<b>Problem</b>	LimitLIS® system requirements were not met.
<b>Cause</b>	According to the “LimitLIS® HL7 Specification Requirements” document, all date/time values should be in the <a href="#">DTM</a> format: YYYYMMDDHHMM or YYYYMMD  LimitLIS® system validates all fields containing date/time and rejects the invalid ones.



	There are a number of required date/time fields in the EHR Order, such as Patient DOB, Guarantor DOB, and Collection Date. The error message may indicate a specific field.
<b>Solution</b>	<ol style="list-style-type: none"> <li>1. Download the HL7 file from EHR Order (EHO) details page. In the file, check all date/time fields and find the invalid value; write down the segment and the field number (e.g. PID.7).</li> <li>2. Inform the Provider/Vendor of the need to send the EHR Order with the correct <a href="#">DTM</a> format of the date/time in the specific field.</li> <li>3. After receiving an updated Order, a new record will appear with the same External Source ID in the EHR Orders list, and a requisition will be created.</li> </ol>

### Unknown financial class in PV1 segment: scholarship, private pay

<b>Problem</b>	LimitLIS® system requirements were not met.
<b>Cause</b>	<p>LimitLIS® system validates the presence of required values in the EHR Order and checks the compatibility of values in the system.</p> <p>Financial Class is required value and should be one of the codes listed in the “LimitLIS® HL7 Specification Requirements” for PV1.20:</p> <ul style="list-style-type: none"> <li>• Insurance</li> <li>• Medicare</li> <li>• Facility</li> <li>• Patient/Self Pay</li> </ul>
<b>Solution</b>	<p>There are two possible solutions:</p> <ol style="list-style-type: none"> <li>1. Inform the Provider/Vendor of the need to send the EHR Order with the correct Financial Class.</li> <li>2. After receiving an updated Order, a new record will appear with the same External Source ID, in the EHR Orders list, and a requisition will be created.</li> </ol> <p><b>OR</b></p> <ol style="list-style-type: none"> <li>1. Confirm with the Client how the value specified in the error message should map in the system to correspond to the existing ones. <b>For example</b>, “Scholarship” should map to “Patient/Self Pay”.</li> <li>2. Contact RURO Support (support@ruro.com) and request an implementation change.</li> <li>3. After the change is completed, from the “View Automated Orders” list, select the failed Order and click on “Reprocess Order File” tool on the right.</li> <li>4. The EHR Order record will be updated, and a requisition will be created.</li> </ol>

### Relation To Insured: The value ‘Parent’ is not in the dictionary for Property ‘Relation To Insured’

<b>Problem</b>	LimitLIS® system requirements were not met.
<b>Cause</b>	<p>LimitLIS® system validates the presence of required values in the EHR Order and checks the compatibility of values in the system.</p> <p>The Relation To Insured (Insured’s Relationship to Patient) is a required value and should be one of the codes listed in the “LimitLIS® HL7 Specification Requirements” for IN1.17 and GT1.11:</p> <ul style="list-style-type: none"> <li>• SEL^Self</li> <li>• SPO^Spouse</li> </ul>





	<ul style="list-style-type: none"> <li>• CHD^Child</li> <li>• OTH^Other</li> </ul> <p>If the EHR Order contains a different value, the system will map to “Other”.</p> <p><b>Note:</b> The values in the IN1.17 and GT1.11 fields of the EHR Order should be the same to avoid discrepancies.</p>
<b>Solution</b>	<p>Although the system parses a different value as “Other”, the error may occur. Contact RURO Support (<a href="mailto:support@ruro.com">support@ruro.com</a>).</p>

### bad administrative sex value (not F|M|O|U|A|N|C)

<b>Problem</b>	<p>LimitLIS® system requirements were not met.</p>
<b>Cause</b>	<p>LimitLIS® system checks the compatibility of values in the system.</p> <p>In this case, in the EHR Order, Gender (Sex) is specified incorrectly.</p> <p>The Gender (Sex) should be one of the codes listed in the “LimitLIS® HL7 Specification Requirements” for PID.8, IN1.43, and GT1.9:</p> <ul style="list-style-type: none"> <li>• F – Female</li> <li>• M – Male</li> <li>• U – Unknown</li> </ul>
<b>Solution</b>	<ol style="list-style-type: none"> <li>1. Inform the Provider/Vendor of the need to send the EHR Order with the correct code for Gender fields (PID.8, IN1.43, and GT1.9).</li> <li>2. After receiving an updated Order, a new record will appear with the same External Source ID, in the EHR Orders list, and a requisition will be created.</li> </ol>

### Failed Attempt: disconnected: Idle timeout... (2)

<b>Problem</b>	<p>HL7 Server Connection issue.</p>
<b>Solution</b>	<p>As soon as possible, contact RURO Support (<a href="mailto:support@ruro.com">support@ruro.com</a>) to track the reason of the issue in the error log and resolve it.</p>

### Status Code: 2 no such file

<b>Problem</b>	<p>HL7 Server Configuration issue.</p>
<b>Cause</b>	<p>Orders Remote File Path is not specified or specified incorrectly in HL7 Server Configurations.</p>
<b>Solution</b>	<ol style="list-style-type: none"> <li>1. From EHR Order (EHO) details page, write down the Name of the EHR Server Configuration.</li> <li>2. Open the “LIS System Settings” from the Quick Links panel and click on “Manage HL7 Configurations” button on the right. Select the EHR Server Configuration specified in Step 1 and click the “Edit” button.</li> <li>3. Make sure that in the “Orders File Path” field the correct path is specified (confirm with Provider/Vendor or RURO Support).</li> <li>4. From the “View Automated Orders” list, select the failed Order and click on “Reprocess Order File” tool on the right.</li> <li>5. The EHR Order record will be updated, and a requisition will be created.</li> </ol>



	6. If that did not resolve the issue, contact RURO Support at <a href="mailto:support@ruro.com">support@ruro.com</a> to track the reason of the issue in the error log and resolve it.
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### undefined method '<character or phrase>' for nil:NilClass

### undefined local variable or method '<phrase>' for Limfinity::LISHL7::EHR::Importer:Module

<b>Problem</b>	LimitLIS® system error.
<b>Cause</b>	<p>Error messages listed above and any other error containing “<b>undefined method</b>” or “<b>nil:NilClass</b>” can be caused by any of the following reasons:</p> <ul style="list-style-type: none"> <li>• Inconsistency of values in the EHR Order;</li> <li>• Inconsistency of segments in the EHR Order;</li> <li>• Absence of required values in the EHR Order;</li> <li>• Absence of required segments in the EHR Order;</li> <li>• Unknown issue.</li> </ul>
<b>Solution</b>	As soon as possible, contact RURO Support at <a href="mailto:support@ruro.com">support@ruro.com</a> to track the reason of the issue in the error log and resolve it.

### no implicit conversion of Symbol into Integer

<b>Problem</b>	LimitLIS® system error.
<b>Solution</b>	As soon as possible, contact RURO Support at <a href="mailto:support@ruro.com">support@ruro.com</a> to track the reason of the issue in the error log and resolve it.

### get\_relation\_to\_insured - Unsupported segment type: String

<b>Problem</b>	LimitLIS® system error.
<b>Solution</b>	As soon as possible, contact RURO Support at <a href="mailto:support@ruro.com">support@ruro.com</a> to track the reason of the issue in the error log and resolve it.

### A copy of <script name> has been removed from the module tree but is still active!

<b>Problem</b>	LimitLIS® system error.
<b>Solution</b>	As soon as possible, contact RURO Support at <a href="mailto:support@ruro.com">support@ruro.com</a> to track the reason of the issue in the error log and resolve it.



## Meaning of Warnings Messages

Warning messages are strictly informative and do not prevent processing the Order; nevertheless, they may provide important information regarding the EHR Order.

The tables below show the most common warnings in the LimitLIS® system along with their cause and resolution.

If the data transmission causes a warning message that is not specified in this document, please bring this fact to the attention of RURO Support at [support@ruro.com](mailto:support@ruro.com).

### Could Not Find Diagnosis Code 'F10'

#### Could Not Find Medication (Medication <medication name>)

<b>Problem</b>	LimitLIS® system requirements were not met. The record does not exist in the system
<b>Cause</b>	LimitLIS® validates the presence of required values in the EHR Order and checks the compatibility of values in the system.  Error messages listed above report that the EHR Order contains information that does not exist in the system.  Diagnosis codes, located in the DG1.3.1, and Medication descriptions, located in the NTE.3 field of the HL7 file, must exist in the system in order to be assigned to EHR Orders.
<b>Solution</b>	<ol style="list-style-type: none"> <li>1. Make sure the record specified in the warning message exists in the LimitLIS® system.</li> <li>2. Confirm with the Client and create the corresponding record if it does not exist.</li> <li>3. From the “View Automated Orders” list, select the Order and click on “Reprocess Order File” tool on the right.</li> <li>4. The EHR Order record and requisition will be updated.</li> </ol> <p><b>Note:</b> The requisition can be updated only if it’s in the “Submitted” state; otherwise, a new ORU message should be sent.</p>

#### Requisition <External Source ID> already exists in the system in the following state: ["Submitted"]. Updating Requisition information with import.

<b>Purpose</b>	Informs about the updating of the Requisition from the EHR Order; no additional actions required.
<b>Description</b>	The requisition with the same External Source ID already exists in the system in the “Submitted” State. The requisition was updated from the Order.

#### Created Patient <Patient External Source ID>

<b>Purpose</b>	Informs about the creation of a new Patient record from the EHR Order; no additional actions required.
<b>Description</b>	A new Patient record is created from the EHR Order. <b>Note:</b> The Patient record can be created from EHR Order only if the “Create Patient” function is enabled in the HL7 Server Configuration. Otherwise, the system will not process the EHR Order if the Patient does not exist.





## HL7 Result (ORU\_R01) Message

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Once a Requisition is released, the LimitLIS® system sends the ORU Result message to the receiving application, and a new **EHR Report** record is created in the system. This record contains data associated with the ORU Message, including error and status information, in the “Comments” field.

To troubleshoot problems with the EHR Result message, refer to the particular EHR Result record accessed under **Explorer > Logs & Messages > EHR Reports**.

### EHR Result record contains the following entities:

- **EHR Server Configuration** – displays the configured EHR Server Name associated with the receiving Facility. Commonly, this is HL7 Provider/Vendor Name
- **Requisition** – Requisition ID in the LimitLIS® system of the released requisition.
- **Patient** – patient name and MRN.
- **File** – HL7 Result file containing the transmitted information between systems in the ORU format. Can be downloaded.
- **Comments** – contains the status of the transmitted data or error message related to the EHR Report message.
- **Creation Date** – date and time of the EHR Result record creation in the LimitLIS® system.

## Meaning of Status/Error Messages

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Status/Error messages show the status of the transmitted data or indicate problems encountered by the application during submission of the ORU message.

The tables below show the most common status/error messages in the LimitLIS® system along with their cause and resolution.

If the data transmission causes a processing problem that is not specified in this document, please bring this fact to the attention of RURO Support at [support@ruro.com](mailto:support@ruro.com).

### Status Code: 0 OK, File successfully Uploaded to <Remote File Path>/<file name>

<b>Purpose</b>	Indicates successful processing of the Result message and provides the file name and the Remote File Path for access; no additional actions required.
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### Status Code: 2 no such file, open <Remote File Path>/<file name>

<b>Problem</b>	HL7 Server Configuration issue.
<b>Cause</b>	Remote File Path is not specified or is specified incorrectly in HL7 Server Configurations.



<b>Solution</b>	<ol style="list-style-type: none"> <li>1. From EHR Reports details page, write down the Name of the EHR Server Configuration.</li> <li>2. Open the Facility associated with the EHR Report and click on the “EHR Account” tool on the right. Make sure the same EHR Server Configuration value is specified. Close the window.</li> <li>3. From the Facility details page, click on “Settings &amp; Options” tool on the right. Write down the Remote File Path value. Close the window.</li> <li>4. Open “LIS System Settings” from the Quick Links panel and click on “Manage HL7 Configurations” tool on the right. Select the EHR Server Configuration specified in Step 1 and click on “Edit” tool.</li> <li>5. If the box “Use Global File Path” is checked, make sure that the “Remote File Path” is specified (confirm with Provider/Vendor or RURO Support).</li> <li>6. If the box “Use Global File Path” is unchecked, make sure that the Facility Remote File Path is specified (confirm the path recorded in Step 3 with Provider/Vendor or RURO Support).</li> <li>7. Open the Requisition associated with the EHR Report and click on “Resend EHR Results” button. The ORU message will be re-sent, and a new EHR Report record will be created.</li> <li>8. If the above steps did not resolve the issue, contact RURO Support at <a href="mailto:support@ruro.com">support@ruro.com</a> to track the reason of the issue in the error log and resolve it.</li> </ol>
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#### <HL7 Server Configuration> SFTP is currently disabled

<b>Problem</b>	HL7 Server Configuration issue.
<b>Cause</b>	HL7 Server Configuration is disabled
<b>Solution</b>	<ol style="list-style-type: none"> <li>1. Open “LIS System Settings” from the Quick Links panel and click on “Manage HL7 Configurations” tool on the right. Select the HL7 Server Configuration specified in the error message and click on “Edit” tool.</li> <li>2. Check the box “Enabled”. Make sure the rest of settings are correct and click OK.</li> <li>3. Open the requisition associated with the EHR Result and click on “Resend EHR Results” tool. The ORU message has been sent, and a new EHR Report record has been created.</li> <li>4. If the above did not resolve the issue, contact RURO Support at <a href="mailto:support@ruro.com">support@ruro.com</a> to track the reason of the issue in the error log and resolve it.</li> </ol>

#### Failed Attempt: disconnected: Idle timeout... (2)

#### Failed Attempt: connection closed by remote host

#### Failed Attempt: Input/output error @ io\_write - <STDERR>

<b>Problem</b>	HL7 Server Connection issue.
<b>Solution</b>	As soon as possible, contact RURO Support at <a href="mailto:support@ruro.com">support@ruro.com</a> to track the reason of the issue in the error log and resolve it.



## HL7 Billing (DFT\_P03) Message

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Once a Requisition is released, the LimitLIS® sends the DFT Billing message to the receiving application, and a new **Billing Record** is created in the system. This record contains data associated with the DFT Message, including error and status information, in the “Comments” field.

To troubleshoot problems with the Billing message, refer to the particular Billing Record accessed by navigating to the “**Billing Records**” quick link located on the left side of the home screen or located under **Explorer > Logs & Messages > Billing Records**.

### Billing Record contains the following entities:

- **Requisition** – Requisition ID in the LimitLIS® system.
- **Patient** – patient name and MRN.
- **File** – HL7 billing file containing the transmitted information between systems in DFT format. Can be downloaded.
- **Comments** – contains the status of the transmitted data or error message related to the DFT message.
- **Creation Date** – date and time of the Billing Record creation in the LimitLIS® system.
- **Created By** – Name of the User who released the requisition.

## Meaning of Status/Error Messages

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Status/Error messages show the status of the transmitted data or indicate problems encountered by the application during submission of the DFT message.

The tables below show the most common status/error messages in the LimitLIS® system along with their cause and resolution.

If the data transmission causes a processing problem that is not specified in this document, please bring this fact to the attention of RURO Support at [support@ruro.com](mailto:support@ruro.com).

### <HL7 Server Configuration> MLLP is currently disabled

<b>Problem</b>	HL7 Server Configuration issue.
<b>Cause</b>	HL7 Server Configuration is disabled
<b>Solution</b>	<ol style="list-style-type: none"> <li>1. Open “LIS System Settings” from the Quick Links panel and click on “Manage HL7 Configurations” tool on the right. Select the HL7 Server Configuration specified in the error message and click on “Edit” tool.</li> <li>2. Check the box “Enabled”. Make sure the rest of settings are correct and click OK.</li> <li>3. Open the requisition associated with the Billing message and click on “Resend To Billing” button, or, from the Billing Record details page, click on “Resend HL7 File” button. The DFT message will be re-sent, and a new Billing Record will be created.</li> <li>4. If the above did not resolve the issue, contact RURO Support at <a href="mailto:support@ruro.com">support@ruro.com</a> to track the reason of the issue in the error log and resolve it.</li> </ol>



**Failed Attempt: getaddrinfo: Name or service not known**

<b>Problem</b>	HL7 Server Configuration issue.
<b>Cause</b>	HL7 Server is configured incorrectly
<b>Solution</b>	<ol style="list-style-type: none"> <li>1. Open “LIS System Settings” from the Quick Links panel and click on “Manage HL7 Configurations” tool on the right. Select the HL7 Server Configuration of DFT type and click on “Edit” tool.</li> <li>2. Make sure the settings are correct, change if not. Click OK.</li> <li>3. Open the requisition associated with the Billing message and click on “Resend To Billing” tool, or, from the Billing Record details page, click on “Resend HL7 File” tool. The DFT message has been sent, and a new Billing Record has been created.</li> <li>4. If the above did not resolve the issue, contact RURO Support at <a href="mailto:support@ruro.com">support@ruro.com</a> to track the reason of the issue in the error log and resolve it.</li> </ol>

**Failed Attempt: Connection refused - connect(2) for "192.168.2.18" port 990**

**Failed Attempt: SSL\_connect returned=1 errno=0 state=unknown state: unknown protocol**

<b>Problem</b>	HL7 Server Configuration issue.
<b>Cause</b>	HL7 Server configured incorrectly.
<b>Solution</b>	<ol style="list-style-type: none"> <li>1. From the Billing Record details page, download the HL7 Billing file and write down the HL7 Provider Name located in the MSH.5 field.</li> <li>2. Open “LIS System Settings”, from the Quick Links panel, and click on “Manage HL7 Configurations” tool on the right. Select the HL7 DFT Provider specified in Step 1 and click on “Edit” tool.</li> <li>3. Make sure the following settings are correct. If incorrect, update and click OK to save. <ul style="list-style-type: none"> <li>• HL7 Server Type</li> <li>• HL7 Host Name</li> <li>• HL7 Host Port</li> </ul> </li> <li>4. If the above did not resolve the issue, contact RURO Support at <a href="mailto:support@ruro.com">support@ruro.com</a> to track the reason of the issue in the error log and resolve it.</li> </ol>

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