



LimitLIS®

Release Notes

- v4.0

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COMMON ACRONYMS

Comma Separated Values (CSV)
Hypertext Markup Language (HTML)
Extensible Markup Language (XML)
Identifier (ID)
Personal Identification Numbers (PIN)
User Defined Field (UDF)
User Interface (UI)

EXECUTIVE SUMMARY

RURO, Inc. is pleased to announce the release of LimitLIS® 4.0. This release includes a new and refreshed user interface, upgrade to Limfinity® framework version 7.1, redesigned physician portal, ability to specify analyte orders used in test result reports and test packages, integrated Limfinity® StorageModule, and new integrations for MDx & hematology instruments.

New integrations include:

- BD Max bi-directional interface
- Quidel Solana bi-directional interface
- Medica EasyRA
- Siemens Dimension
- Siemens BN ProSpec

Additional highlights of this release include the following:

- Ability to specify assignees on requisitions, samples, and batches
- Personalized to-do lists for each user with current assignments
- Option to automatically accession samples upon receipt
- Ability to assign and remove multiple holds from requisitions at once
- HL7 validator for schema and content of HL7 messages
- Facility's email address as the "Reply To" header on email communications
- Assignment of physicians to patients
- Improved handling of result data from multiple instruments of the same model
- Re-designed attachments functionality
- Updates to insurance cards
- FY2019 CMS ICD10 CM Code Descriptions
- Billing Subscriber Phone Number transmittable in HL7 communications
- Various usability improvements to facilitate faster adoption
- Bug fixes

NEW FEATURES AND ENHANCEMENTS

REPORTS

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Title Reordering analytes in test packages and reports

Description:

With LimitLIS® v. 4.0, lab managers and admins can now order analytes in the order that they would like to see them on the result report by using drag and drop within the test containing the analytes. The order set by the users will be preserved on both the report and the test containing the analytes so that the analytes will be listed on the result reports according to the order manually set by lab staff.

Title Regenerating reports for multiple requisitions

Description:

LimitLIS® v. 4.0 adds ability to regenerate reports for multiple requisitions at once (previously reports could only be regenerated one at a time). Report dates will be updated on reports for all chosen requisitions.

REQUISITIONS

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Title Assigning requisitions

Description:

LimitLIS® v. 4.0 now provides additional ways to monitor the work of laboratory staff by adding assignments. One or more requisitions can be assigned to a user with an account in LimitLIS®. Upon logging in, each user will see a list of their assigned requisitions under the “My Requisitions” tile on the laboratory dashboard.

Title Releasing holds and assigning holds to a requisition

Description:

When placing a requisition on hold in LimitLIS® v. 4.0, users can select one or multiple holds (reasons) as to why the requisition is being placed on hold. The assigned holds can be released one by one or multiple at a time by lab staff from the requisition screen.

Title Improved requisition attachments

Description:

RURO, Inc., has made several key updates to attachments in LimitLIS® v. 4.0. All attachments for a requisition are now managed through the “Attachments” tab, where attachments can be uploaded, removed, or annotated in bulk. Each attachment will be displayed as a row in a grid with each file being displayed as a thumbnail. Additionally, physicians and facility staff will now be able to upload attachments to requisitions in the “Accepted” state.

Title ICD10 FY2019 code list

Description:

The ICD10 code set has been updated to the latest FY2019 CMS ICD10 CM Code Descriptions usable. Per CMS guidance, these 2019 ICD-10 CM codes are to be used from October 1, 2018 through September 30, 2019.

PHYSICIANS

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Title Physician Portal Improvements

Description:

LimitLIS® v 4.0 further improves the physician portal user experience by adding key enhancements aimed at physicians that concurrently visit multiple facilities.

- Physicians can now be registered at multiple facilities in the system (previously they could only be registered at one facility)

- Physician Portal dashboard now provides a “Facility” filter that will filter all the data on the dashboard by the specified facility or aggregate data across all of the physician’s facilities
- Patients, communications, requisitions and schedules can now be all filtered by facility or aggregated across all of the physician’s facilities
- When creating a new requisition from the Physician Portal, the client facility is no longer hardcoded and is now selectable from a list of physician’s current facilities.
- Enabling the Physician Portal is now a system setting

Title Assigning physicians to patients

Description:

LimitLIS® v. 4.0 further limits access to patients’ personal data by allowing clients to select a specific physician when creating a patient. If the patient has an assigned physician, then only the assigned physician will be able to create new requisitions for that patient and access the patient’s data. Other physicians at the same facility will not be able to view the patient or any of the patient’s data such as requisitions, samples, or test result reports.

PATIENTS

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Title Updates to patient insurance cards

Description:

With LimitLIS® v. 4.0, RURO, Inc. made further improvements to handling of patient insurance cards. The following additional fields are now available when capturing a new patient insurance card:

- Bill To Group
- Primary Physician
- Relation to Insured
- Subscriber Full Name
- Subscriber DOB
- Subscriber Sex
- Subscriber Address
- Subscriber Phone Number

It is possible to update patient information at the time of creation of the insurance card. Since the patient record can only hold three insurance records, the users will be prompted with a list of current insurance records and asked to choose the record to replace with the the new insurance card. Additionally, users can update the patient’s information from any of the attached insurance cards at any time by selecting an insurance card and clicking on “Update Patient Information”.

Title Improved patient attachments

Description:

RURO, Inc. has made several key updates to attachments in LimitLIS® v. 4.0. All attachments for a patient are now managed through the “Attachments” tab, where attachments can be uploaded, removed, or annotated in bulk. Each attachment will be displayed as a row in a grid with each file being displayed as a thumbnail, similar to how requisition attachments are displayed.

SAMPLES

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Title Auto-accessioning of received samples

Description:

With the release of LimitLIS® v. 4.0, RURO, Inc. added a new system setting to automatically accession samples based on specimen types and tests. If the “Auto-accession sample on requisition receipt” setting is checked, the system will automatically accession one sample for each specimen type received with the requisition and automatically assign tests associated with each specimen type.

Title Assigning samples

Description:

LimitLIS® v. 4.0 now provides additional ways to monitor the work of laboratory staff by adding assignments. One or more samples can be assigned to a user with an account in LimitLIS®. Upon logging in, each user will see a list of their assigned samples under the “My Samples” tile on the laboratory dashboard.

Title Storage Module

Description:

The Limfinity® Storage Module is a new Limfinity® BRICK that adds comprehensive sample storage management to LimitLIS® v. 4.0. This add-on allows users to build out virtual freezers with unlimited storage levels, quickly locate samples or boxes by scanning barcodes and track the location of each sample within a box or well plate. Samples can be stored one by one or in batch by assigning storage locations.

With the Storage Module lab staff can perform the following actions:

- View freezer capacity indicators
- View graphical box/well plate views
- Cut and paste samples from box to box
- Differentiate between color-coded sample types
- Configure storage structure to match layout of their freezers
- Create detached containers and bags
- Look up samples or containers by barcode

CLIENT FACILITIES

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Title Improved facility attachments

Description:

RURO, Inc. has made several key updates to attachments in LimitLIS® v. 4.0. All attachments for a facility are now managed through the “Attachments” tab, where attachments can be uploaded, removed, or annotated in bulk. Each attachment will be displayed as a row in a grid with each file being displayed as a thumbnail, similar to requisition attachments.

Title Replying to facility communications will now use the email address of the facility

Description:

The service emails sent from facility when a new communication was opened will now use the facility’s email address in the “Reply To” header. Replying to the email will automatically set the facility’s email address as the recipient. This change was made in order to facilitate direct communication between lab staff and client facilities.

INSTRUMENTS & TEST RESULTS

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Title Batch Improvements

Description:

With the release of LimitLIS® v. 4.0, RURO added many improvements to batches:

- File imports will now automatically create batches

- Batch names are set as the import file name by default, but can be configured with custom logic
- Multiple imports can be tied to a single batch and the batch contains all results for the samples that were imported, i.e. the batch may have test result data for samples that were imported across multiple files or received from an instrument.
- Batches now allow users to finalize all test results or release all requisitions belonging to that batch.
- Users can now finalize and edit all QC Test Results belonging to a batch from the batch screen.
- Batches can now be assigned to users with an account in LimitLIS®. Upon logging in, each user will see a list of their assigned batches under the “My Batches” tile on the LimitLIS® dashboard.

Title Improvements to instrument integration

Description:

LimitLIS® v. 4.0 further enhances instrument integrations:

- Data transfers between the instrument Raspberry Pi and the instrument is encrypted
- Instrument data logs are now stored on the instrument record and can be accessed for troubleshooting
- When multiples of the same instrument exist, the file import will no longer require the user to select the exact instrument associated with the upload. Users will now be able to select the type of instrument (e.g. “AB Sciex 4000”) and have the system match the serial number in the import file to the existing instrument record

INSTRUMENTS

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Title Direct instrument integrations

Description:

RURO has completed direct integrations with the following instruments in LimitLIS® v. 4.0:

- BD Max
- Solana Quidel
- Medica EasyRA
- Siemens Dimension
- Siemens BN ProSpec

BILLING

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Title Bulk regeneration of billing records

Description:

Multiple billing records can now be regenerated in LimitLIS® v 4.0. When creating this option, a new HL7 file will be created for each selected billing record based on the current data in the system.

Title HL7 Validator against RURO HL7 Spec

Description:

LimitLIS® v 4.0 adds ability to validate HL7 messages against the RURO HL7 standard. By using the validator, admins are able to upload the HL7 file of type: ORM, ORU, DFT and validate it against the RURO HL7 spec. Each segment in the file will be validated and errors/warnings will be displayed if the file does not conform to the RURO spec.

EMR/EHR PROVIDERS & REFERENCE LAB INTEGRATIONS

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Title EMR – Enhancements and Bug fixes

Description:

LimitLIS® v 4.0 adds enhancements and fixes for unidirectional and bidirectional EMR workflows. Key enhancements and fixes include, but are not limited to:

- Subscriber Phone Number can now be populated from EMR Orders
- Subscriber Phone Number if present will be sent in ADT & DFT messages
- Updated logic for setting of Collection Date and POC Testing Date for OBR segments
- Diagnoses can now be captured on Point of Care Test Results
- ICD10 codes can no longer be duplicated on the patient record