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Data Compliance Test (DCT)

Test Cases for

LABGEN Record

*<HCP Name>*

Table of Contents

[1 Testing Instructions to HCPs 3](#_Toc198289086)

[1.1 Self-Service Testing Phase 3](#_Toc198289087)

[1.2 Final Testing Phase 3](#_Toc198289088)

[1.3 Preparation DCT Test Report 4](#_Toc198289089)

[2 Test Case Details 5](#_Toc198289090)

[LABGEN-LV3-001 [FOR LEVELS 3 DATA UPLOAD ONLY] 5](#_Toc198289091)

[LABGEN-LV3-002 [FOR LEVELS 3 DATA UPLOAD ONLY] 18](#_Toc198289092)

[LABGEN-LV2-001 [FOR LEVEL 2 DATA UPLOAD ONLY] 30](#_Toc198289093)

[LABGEN-LV2-002 [FOR LEVEL 2 DATA UPLOAD ONLY] 43](#_Toc198289094)

[LABGEN-LV1-001 [FOR LEVEL 1 DATA UPLOAD ONLY] 54](#_Toc198289095)

[LABGEN-LV1-002 [FOR LEVEL 1 DATA UPLOAD ONLY] 59](#_Toc198289096)

[3 Appendix – Sample Messages 65](#_Toc198289097)

[4 Appendix – Testing HCP and HCRs Information 68](#_Toc198289098)

[5 Appendix – Sample Results in eHR Viewer (EVE) 69](#_Toc198289099)

[6 Appendix – Actual Data Values (Sample) 70](#_Toc198289100)

# Testing Instructions to HCPs

## Self-Service Testing Phase

* After development of the data upload programmes, you can use the **Self-Service test accounts and test HCRs** provided by eHealth for connection to the eHealth testing environment and proceed with the self-service testing.
* You can proceed with the Self-service test at your own pace by following this Self-Service Testing Guide and using the test cases provided in section 2.
* You can verify the **correctness** and **completeness** of the data upload by:
* checking the interface files / messages generated in your system against the sample expected results of interface files /messages for all test cases as provided;
* checking the results on eHR Viewer (EVE) by logging into the testing eHealth with the provided test account; and
* checking the upload status through Process Summary and Exception Report in eHR Inbox by logging into the testing eHealth.
* For data fields requiring eHR Codex values, you can refer the Code Sets provided with the Self-Service Kit.
* For details of technical requirements of the data interface files, please refer to the ‘Developer Quick Guide for LABGEN Data Upload to eHealth.docx’.
* You are required to perform the test cases that are relevant to the data compliance level (Level 2, 3.1 or 3.2) supported by your clinic.
* You are required to perform the first batch of data upload by **Data Materialization** (**DM**) mode. **DM mode** is denoted in the interface by a fixed value **BL-M** in *HL7 OBX.4*
* You should use **Incremental Load** (**INC**) mode for the second batch of data upload to update the previously uploaded records. **INC mode** is denoted in the interface by a fixed value **BL** in *HL7 OBX.4.*
* Since the **DM** mode would replace the corresponding records previously uploaded to eHealth, you may repeat your testing unlimited number of times by uploading the first batch by **DM** mode.
* Laboratory reports can have several reporting statuses for a laboratory test request. A unique record key should be used to upload laboratory records with different report statuses under the same laboratory request number. And each record uploaded should have a complete laboratory record containing all authorized reports.
* When all required test cases can be completed smoothly and correctly in this phase, you can proceed to the Final Testing Phase and submit **production environment setup form** to eHR DCT Support for preparation.

## Final Testing Phase

* You can start the Final Testing Phase once all test cases in the Self-Service Testing phase are passed.
* You should start Final Test by executing the test cases provided in section 2 with **Final Testing HCRs** provided by eHR DCT Support.
* You can verify the **correctness** and **completeness** of testing results by checking results in eHR Viewer (EVE) and the upload status through Process Summary and Exception Report in eHR Inbox.
* For LABGEN DCT test cases, there are **TWO** batches of data files / transactions to be uploaded to the testing eHealth. The required records must be correctly uploaded from these 2 consecutive batches respectively.
* The Final Test will be considered PASSED if all the following criteria are met:
* The **TWO** batches of test data files are uploaded consecutively in the correct sequence. The second batch of data files/transactions must be submitted after completion of processing of the first batch by eHealth
* No additional data files / transactions are uploaded in between or after the uploads of the above two batches of data files / transactions to amend any records.
* No exception records are reported from the uploads.
* No manual interventions have been made to the data files / transactions.
* If the Final Test failed, you can re-attempt the Self-Service Test and Final Test until a successful run can be completed.

## Preparation DCT Test Report

* Once you have successfully passed the Final Test based on the above criteria, you should complete this document by attaching the below items to this document at the appropriate space provided:
  + Actual data files uploaded
  + Screen-shot of each test case

You are required to submit this completed ‘DCT Test Cases’ document to eHR DCT Support for further processing. eHR DCT Support will provide feedback **within 10 working days**.

# Test Case Details

* *LABGEN-LV3-001 and LABGEN-LV3-002 : Only applicable for testing level 3 data upload*
* *LABGEN-LV2-001 and LABGEN-LV2-002 : Only applicable for testing level 2 data upload*
* *LABGEN-LV1-001 and LABGEN-LV1-002 : Only applicable for testing level 1 data upload*
* *Please complete and collect the upload results for LABGEN-xxx-001 before proceeding to LABGEN-xxx-002.*

| **1** | **Test Case ID** | LABGEN-LV3-001 [FOR LEVELS 3 DATA UPLOAD ONLY] |
| --- | --- | --- |
|  | **Function Description** | HCP received sharing consents from testing HCRs, then perform the first data upload of HCRs’ laboratory records to eHealth by DM Mode for Level 3 data. |
| **Subsequent case of** | N/A |
| **Testing Assumption** | * HCR1-HCR4 have already given sharing consents to the HCP. * The eMR system contains laboratory records of these HCRs and will upload all the laboratory (general) records of <HCR1> - <HCR4> to eHealth in Batch 1 data files created by DM mode. |
| **Test Actions** | HCP creates below LABGEN records in the local lab information system (LIS): |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | 1a | **Case scenario**: Register the lab test request of renal function tests (RFT) with eGFR in LIS for <HCR1>. The registered profile tests are standardised tests (mapped with LOINC codes). Upload the lab record when the results are ready, details as follows:  Expected data contents for Level 3 lab record:  **Laboratory test request data**   * Laboratory test order number = 99087819043:OR12345678 * Laboratory test request healthcare institution identifier = [source system provided] * Laboratory test request healthcare institution long name = [source system provided] * Laboratory test request healthcare institution local name = Dr CHAN Medical Centre * Panel local code = RFT\_eGFR * Panel local description = Renal Function Tests & eGFR   **Laboratory result general information data**   * Laboratory test request performing laboratory name = ABC Laboratory * Laboratory test request number = 24GX0011 * Laboratory category code = GEOT * Laboratory category description = General & Other * Laboratory category local description = General Laboratory * Laboratory report status code = F * Laboratory report status description = Final report * Laboratory report status local description = Original report * Laboratory report reference datetime = 10-Jul-2024 14:33:00   **Specimen data**   * Specimen collection datetime = 10-Jul-2024 14:33:00 * Specimen arrival datetime = 10-Jul-2024 14:33:00 * Specimen type local description = Blood   **General Laboratory test result data (Lab test result 1 – 5)**  Lab Test Result 1   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 22664-7 * Laboratory test name description - recognised terminology = Urea [Moles/volume] in Serum or Plasma * Laboratory test name local code = UREA * Laboratory test name local description = Urea * Laboratory Test Result Type = 1 * Laboratory test numeric result = 9.0 * Laboratory test reportable result = 9.0 * Laboratory test usable result = 9.0 * Laboratory test result unit = mmol/L * Laboratory test reference range = 3.0 - 9.2   Lab Test Result 2   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 14682-9 * Laboratory test name description - recognised terminology = Creatinine [Moles/volume] in Serum or Plasma * Laboratory test name local code = CR * Laboratory test name local description = Creatinine * Laboratory Test Result Type = 1 * Laboratory test numeric result = 158 * Laboratory test reportable result = 158 * Laboratory test usable result = 158 * Laboratory test result unit = umol/L * Laboratory test reference range = 65 - 104 * Abnormal result indicator code = H * Abnormal result indicator description = High * Abnormal result indicator local description = High   Lab Test Result 3   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 62238-1 * Laboratory test name description - recognised terminology = Glomerular filtration rate/1.73 sq M.predicted [Volume Rate/Area] in Serum or Plasma by Creatinine-based formula (CKD-EPI) Laboratory test name local code = EGFR * Laboratory test name local description = eGFR (by CKD-EPI Calc) * Laboratory Test Result Type = 1 * Laboratory test numeric result = 39 * Laboratory test reportable result = 39 * Laboratory test usable result = 39 * Laboratory test result unit = mL/min/1.73m sq * Laboratory test reference range = > 60 * Abnormal result indicator code = L * Abnormal result indicator description = Low * Abnormal result indicator local description = Lo * Laboratory test result note = 1. Estimated GFR (eGFR) is a calculated by default using the Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI) equation for non-African Americans. For African Americans, multiply by 1.159 fpr the eGFR, using the same reference range. * 2. The eGFR equation is not accurate for results > 60 mL/min/ 1.73m sq; therefore, values above this, although reported, should not be regarded as an exact value.   Lab Test Result 4   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 2951-2 * Laboratory test name description - recognised terminology = Sodium [Moles/volume] in Serum or Plasma * Laboratory test name local code = NA * Laboratory test name local description = Sodium * Laboratory Test Result Type = 1 * Laboratory test numeric result = 142 * Laboratory test reportable result = 142 * Laboratory test usable result = 142 * Laboratory test result unit = mmol/L * Laboratory test reference range = 135 - 145   Lab Test Result 5   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 2823-3 * Laboratory test name description - recognised terminology = Potassium [Moles/volume] in Serum or Plasma * Laboratory test name local code = K * Laboratory test name local description = Potassium * Laboratory Test Result Type = 1 * Laboratory test numeric result = 3.9 * Laboratory test reportable result = 3.9 * Laboratory test usable result = 3.9 * Laboratory test result unit = mmol/L * Laboratory test reference range = 3.5 - 5.3   **Laboratory report data**   * Laboratory report (PDF) = [Generated PDF report with the above data and file name] * File indicator = 1 * File name = [PDF file name upload by HCP] * Laboratory report date = 15-Jul-2024 19:03   == Actual data values (Refer to “Appendix - Actual Data Values (Sample)” for details)  Expected result:   1. Data Upload without any problems 2. Lab record can pass Level 3 data validation 3. The Laboratory record will be shown in the Laboratory Record Module of eHR Viewer (EVE):    1. For Laboratory Cumulative Result(s):       1. All lab tests are mapped with valid LOINC codes & descriptions. The test results 1 – 5 will be shown with their corresponding eHR test names (Level 3 data)       2. Out-ranged Creatinine result is highlighted in red with abnormal result indicator ↑    2. At Laboratory Details:       1. All lab test results 1 – 5 will be shown with their local test name (Level 2 data) 4. The report image will be shown in the eHR Viewer (EVE). |
| 1b | **Case scenario**: Register the lab test request of liver function tests (LFT) with CA 19.9 test in LIS for <HCR2>. Registered LFT are standardised tests (mapped with LOINC codes) and CA 19.9 is a structured test and has no LOINC mapping. Upload the lab record when the results are ready, details as follows:  Expected data contents for Level 3 lab record:  **Laboratory test request data**   * Laboratory test order number = 99087819043:OR11112222 * Laboratory test request healthcare institution identifier = [source system provided] * Laboratory test request healthcare institution long name = [source system provided] * Laboratory test request healthcare institution local name = Dr CHAN Medical Centre * Panel local code = LFT\_CA199 * Panel local description = Liver Function Tests & CA 19.9   **Laboratory result general information data**   * Laboratory test request performing laboratory name = ABC Laboratory * Laboratory test request number = 24CP10111 * Laboratory category code = GEOT * Laboratory category description = General & Other * Laboratory category local description = General Laboratory * Laboratory report status code = F * Laboratory report status description = Final report * Laboratory report status local description = Original report * Laboratory report reference datetime = 22-Aug-2024 13:01:00   **Specimen data**   * Specimen collection datetime = 22-Aug-2024 13:01:00 * Specimen arrival datetime = 22-Aug-2024 16:00:00 * Specimen type local description = Blood   **General Laboratory test result data (Lab test result 1 – 6)**  Lab Test Result 1   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 14631-6 * Laboratory test name description - recognised terminology = Bilirubin.total [Moles/volume] in Serum or Plasma * Laboratory test name local code = TBIL * Laboratory test name local description = Total Bilirubin * Laboratory Test Result Type = 1 * Laboratory test numeric result = 7 * Laboratory test reportable result = 7 * Laboratory test usable result = 7 * Laboratory test result unit = umol/L * Laboratory test reference range = ≤18   Lab Test Result 2   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 1742-6 * Laboratory test name description - recognised terminology = * Alanine aminotransferase [Enzymatic activity/volume] in Serum or Plasma * Laboratory test name local code = ALT * Laboratory test name local description = ALT (GPT) * Laboratory Test Result Type = 1 * Laboratory test numeric result = 33 * Laboratory test reportable result = 33 * Laboratory test usable result = 33 * Laboratory test result unit = U/L * Laboratory test reference range = ≤86 * Laboratory test result note = Note: New pediatric reference intervals for ALT (GPT) applied as of 07 Mar 2017   Lab Test Result 3   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 6768-6 * Laboratory test name description - recognised terminology = Alkaline phosphatase [Enzymatic activity/volume] in Serum or Plasma * Laboratory test name local code = ALKPHOS * Laboratory test name local description = Alk. Phosphatase * Laboratory Test Result Type = 1 * Laboratory test numeric result = 119 * Laboratory test reportable result = 119 * Laboratory test usable result = 119 * Laboratory test result unit = U/L * Laboratory test reference range = 43-105 * Abnormal result indicator code = H * Abnormal result indicator description = High * Abnormal result indicator local description = High   Lab Test Result 4   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 2885-2 * Laboratory test name description - recognised terminology = Protein [Mass/volume] in Serum or Plasma * Laboratory test name local code = TP * Laboratory test name local description = Total Protein * Laboratory Test Result Type = 1 * Laboratory test numeric result = 73 * Laboratory test reportable result = 73 * Laboratory test usable result = 73 * Laboratory test result unit = g/L * Laboratory test reference range = 66-80 * Laboratory test result note = Note: Total protein concentration is 4 - 8 g/L lower from patient in the recumbent rather than ambulatory status   Lab Test Result 5   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 1751-7 * Laboratory test name description - recognised terminology = Albumin [Mass/volume] in Serum or Plasma * Laboratory test name local code = ALB * Laboratory test name local description = Albumin * Laboratory Test Result Type = 1 * Laboratory test numeric result = 47 * Laboratory test reportable result = 47 * Laboratory test usable result = 47 * Laboratory test result unit = g/L * Laboratory test reference range = 35-52   Lab Test Result 6   * Laboratory test name - recognised terminology name =<Null> * Laboratory test name identifier - recognised terminology = <Null> * Laboratory test name description - recognised terminology = <Null> * Laboratory test name local code = CA199 * Laboratory test name local description = CA 19.9 (Pancreas) * Laboratory Test Result Type = 1 * Laboratory test numeric result = 15.1 * Laboratory test reportable result = 15.1 * Laboratory test usable result = 15.1 * Laboratory test result unit = kU/L * Laboratory test reference range = ≤37.0   **Laboratory report data**   * Laboratory report (PDF) = [Generated PDF report with the above data and file name] * File indicator = 1 * File name = [PDF file name upload by HCP] * Laboratory report date = 23-Aug-2024 09:10   == Actual data values (Refer to “Appendix - Actual Data Values (Sample)” for details)  Expected result:   1. Data Upload without any problems 2. Lab record will be regraded from Level 3 to Level 2, due to no LOINC information is given for lab test CA 19.9 3. The Laboratory structure data will be shown in the Laboratory Record Module of eHR Viewer (EVE) :    1. At Laboratory Cumulative Result(s):       * Total Bilirubin, ALT, Alk. Phosphatase, Total Protein and Albumin tests are mapped with valid LOINC codes & descriptions. The test results 1 – 5 will be shown with their corresponding eHR test names (Level 3 data)       * Out-ranged Alk. Phosphatase result is highlighted in red with abnormal result indicator ↑       * Lab Test CA 19.9 has no LOINC mapping which will fail the Level 3 data vaildation. The test result will be shown with its local test name (Level 2 data)    2. At Laboratory Details:       * All lab test results 1 – 6 will be shown with their local test name (Level 2 data) 4. The report image will be shown in the eHR Viewer (EVE). |
| 1c | **Case scenario**: Register the lab test service request of fasting glucose in LIS for <HCR3>. Registered glucose test is a standardised test (mapped with LOINC codes). Upload the lab record when the result is ready, details as follows:  Expected data contents for Level 3 record:  **Laboratory test request data**   * Laboratory test order number = 99087819043:OR33335678 * Laboratory test request healthcare institution identifier = [source system provided] * Laboratory test request healthcare institution long name = [source system provided] * Laboratory test request healthcare institution local name = Dr CHAN Medical Centre * Panel local code = FG * Panel local description = Fasting Glucose   **Laboratory result general information data**   * Laboratory test request performing laboratory name = ABC Laboratory * Laboratory test request number = 24CP61234 * Laboratory category code = GEOT * Laboratory category description = General & Other * Laboratory category local description = General Laboratory * Laboratory report status code = F * Laboratory report status description = Final report * Laboratory report status local description = Original report * Laboratory report reference datetime = 22-Sep-2024 14:15:00   **Specimen data**   * Specimen collection datetime = 22-Sep-2024 14:15:00 * Specimen arrival datetime = 22-Sep-2024 16:30:00 * Specimen type local description = Blood   **General Laboratory test result data**  Lab Test Result 1   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 14771-0 * Laboratory test name description - recognised terminology = Fasting glucose [Moles/volume] in Serum or Plasma * Laboratory test name local code = FG * Laboratory test name local description = Glucose, Fasting * Laboratory Test Result Type = 1 * Laboratory test numeric result = 7.5 * Laboratory test reportable result = 7.5 * Laboratory test usable result = 7.5 * Laboratory test result unit = mmol/L * Laboratory test reference range = 3.6 - 6.0 * Abnormal result indicator code = H * Abnormal result indicator description = High * Abnormal result indicator local description = High   **Laboratory report data**   * Laboratory report (PDF) = [Generated PDF report with the above data and file name] * File indicator = 1 * File name = [PDF file name upload by HCP]   == Actual data values (Refer to “Appendix - Actual Data Values (Sample)” for details)  Expected result:   1. Data Upload without any problems 2. Lab record can pass Level 3 data validation 3. The Laboratory structure data will be shown in the Laboratory Record Module of eHR Viewer (EVE): 4. For Laboratory Cumulative Result(s):    * + Fasting Glucose test is mapped with valid LOINC code & description. The test result will be shown with its corresponding eHR test names (Level 3 data)      + Out-ranged Glucose result is highlighted in red with abnormal result indicator ↑ 5. At Laboratory Details:    * + Glucose test result will be shown with its local test name (Level 2 data) 6. The report image will be shown in the eHR Viewer (EVE). |
| 1d | **Case scenario**: Register lab test request of liver function tests (LFT) and CA 242 for <HCR4>. LFT are standardised tests and results are reported in LIS. The CA 242 test has been sent out to another lab for testing. When the send-out test CA 242 is available, the referred lab will return the report image in PDF format a few days later.  Upload the LFT structured data and report image together with send-out CA 242 report image as a single record when all results are ready, details as follows:  Expected data contents for Level 3 lab record:  **Laboratory test request data**   * Laboratory test order number = 99087819043:OR10999546 * Laboratory test request healthcare institution identifier = [source system provided] * Laboratory test request healthcare institution long name = [source system provided] * Laboratory test request healthcare institution local name = Dr CHAN Medical Centre * Panel local code = LFT\_CA242 * Panel local description = Liver Function Tests & CA 242   **Laboratory result general information data**   * Laboratory test request performing laboratory name = ABC Laboratory * Laboratory test request number = 24CP9992341 * Laboratory category code = GEOT * Laboratory category description = General & Other * Laboratory category local description = General Laboratory * Laboratory report status code = F * Laboratory report status description = Final report * Laboratory report status local description = Original report * Laboratory report reference datetime = 03-Oct-2024 10:20:00 * Laboratory report comment = CA 242 has been sent to XYZ Laboratory for further investigation. Please refer to the result in the XYZ Laboratory report.   **Specimen data**   * Specimen collection datetime = 03-Oct-2024 10:20:00 * Specimen arrival datetime = 03-Oct-2024 12:30:00 * Specimen type local description = Blood   **General Laboratory test result data (Lab Test Result 1 - 5)**  Lab Test Result 1   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 14631-6 * Laboratory test name description - recognised terminology = Bilirubin.total [Moles/volume] in Serum or Plasma * Laboratory test name local code = TBIL * Laboratory test name local description = Total Bilirubin * Laboratory Test Result Type = 1 * Laboratory test numeric result = 19 * Laboratory test reportable result = 19 * Laboratory test usable result = 19 * Laboratory test result unit = umol/L * Laboratory test reference range = ≤18 * Abnormal result indicator code = H * Abnormal result indicator description = High * Abnormal result indicator local description = High   Lab Test Result 2   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 1742-6 * Laboratory test name description - recognised terminology = * Alanine aminotransferase [Enzymatic activity/volume] in Serum or Plasma * Laboratory test name local code = ALT * Laboratory test name local description = ALT (GPT) * Laboratory Test Result Type = 1 * Laboratory test numeric result = 100 * Laboratory test reportable result = 100 * Laboratory test usable result = 100 * Laboratory test result unit = U/L * Laboratory test reference range = ≤86 * Abnormal result indicator code = H * Abnormal result indicator description = High * Abnormal result indicator local description = High * Laboratory test result note = Note: New pediatric reference intervals for ALT (GPT) applied as of 07 Mar 2017   Lab Test Result 3   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 6768-6 * Laboratory test name description - recognised terminology = Alkaline phosphatase [Enzymatic activity/volume] in Serum or Plasma * Laboratory test name local code = ALKPHOS * Laboratory test name local description = Alk. Phosphatase * Laboratory Test Result Type = 1 * Laboratory test numeric result = 110 * Laboratory test reportable result = 110 * Laboratory test usable result = 110 * Laboratory test result unit = U/L * Laboratory test reference range = 43-105 * Abnormal result indicator code = H * Abnormal result indicator description = High * Abnormal result indicator local description = High   Lab Test Result 4   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 2885-2 * Laboratory test name description - recognised terminology = Protein [Mass/volume] in Serum or Plasma * Laboratory test name local code = TP * Laboratory test name local description = Total Protein * Laboratory Test Result Type = 1 * Laboratory test numeric result = 50 * Laboratory test reportable result = 50 * Laboratory test usable result = 50 * Laboratory test result unit = g/L * Laboratory test reference range = 66-80 * Abnormal result indicator code = L * Abnormal result indicator description = Low * Abnormal result indicator local description = Low * Laboratory test result note = Note: Total protein concentration is 4 - 8 g/L lower from patient in the recumbent rather than ambulatory status   Lab Test Result 5   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 1751-7 * Laboratory test name description - recognised terminology = Albumin [Mass/volume] in Serum or Plasma * Laboratory test name local code = ALB * Laboratory test name local description = Albumin * Laboratory Test Result Type = 1 * Laboratory test numeric result = 31 * Laboratory test reportable result = 31 * Laboratory test usable result = 31 * Laboratory test result unit = g/L * Laboratory test reference range = 35-52 * Abnormal result indicator code = L * Abnormal result indicator description = Low * Abnormal result indicator local description = Low   **Laboratory report data**  Lab Report 1   * Laboratory report (PDF) = [Generated PDF report with the above data and file name] * File indicator = 1 * File name = [PDF file name upload by HCP] * Laboratory report date = 3-Oct-2024 17:00   Lab Report 2   * Laboratory report (PDF) = [Generated PDF report with the above data and file name] * File indicator = 1 * File name = [PDF file name upload by HCP] * Laboratory report date = 6-Oct-2024 09:10   == Actual data values (Refer to “Appendix - Actual Data Values (Sample)” for details)  Expected result:   1. Data Upload without any problems 2. Lab record can pass Level 3 data validation 3. The Laboratory structure data will be shown in the Laboratory Record Module of eHR Viewer (EVE) :    1. For Laboratory Cumulative Result(s):       * Total Bilirubin, ALT, Alk. Phosphatase, Total Protein and Albumin tests are mapped with valid LOINC codes & descriptions. The test results 1 – 5 will be shown with their corresponding eHR test names (Level 3 data)       * All LFT tests are out-ranged and will be highlighted in red with abnormal result indicators ↑ or ↓       * No structured test result for the send-out test CA 242. Test name and its result will not be shown.    2. At Laboratory Details:       * LFT results (Test Result 1 – 6) will be shown with their local test name (Level 2 data)       * CA 242 test name and its result will not be shown 4. The report images for LFT and CA 242 will be combined as 1 PDF file to show in the eHR Viewer (EVE). |
|  | **Expected eMR System Behavior** | 1. HCP’s eMR system will upload **Batch 1** data fileswith all lab records of created in **1a-1d (Level 3 data)** by DM mode. 2. **Batch 1** data files should include below files: <[sample](#_Appendix_–_Sample)>    1. Participant List (PL)    2. Data File (DF)    3. HL7 message with signature    4. Zip File (embedded PL, DFs and HL7 message files)    5. Zip Control File (contains the filenames of PL, DFs and HL7 message) 3. eMR system uploads **Batch 1** data files (‘Zip File’ and ‘Zip Control File') to eHealth. 4. HCP verifies the data upload status by reviewing the 'Process Summary Report' and 'Exception Report' in eHR Inbox. 5. HCP verifies the completeness and correctness of data uploaded in eHR Viewer. | |
|  | **Results Verification** | * HCP verifies the interface file contents and check if the uploaded records can be properly viewed in eHR Viewer (EVE). HCP must also review if the data batches uploaded can be processed successfully from Process Summary, Data Exception Report or Data Regrade Report from eHR Inbox | |
| **Actual Result**  **(Screenshot / Attachment)** | **Data Files Uploaded:**  *<Attached the Zip file and Control file; password to unzip the file>* | |
| **Attachment/Screenshot:**  *<Attached the screen shots of records uploaded in eHR Viewers>* | |
| **Remark** | *<State your reasons/ justification for exemption with case number>* | |
| **Testing Date** | *<Provided by HCP>* | |
| **Verified By** | *<Provided by HCP>* | |

| **2** | **Test Case ID** | LABGEN-LV3-002 [FOR LEVELS 3 DATA UPLOAD ONLY] | |
| --- | --- | --- | --- |
|  | **Function Description** | There are subsequent changes in HCRs’ clinical records in Batch 1 data upload. HCP uploads incremental changes to eHealth by INC Mode for Level 3 data. | |
| **Subsequent cases of** | LABGEN-LV3-001 | |
| **Testing Assumption** | HCP has already verified that Batch 1 data have been processed successfully with correct test results. | |
| **Test Actions** | HCP updates lab records from Batch 1 in LIS as follows: | |
| 2a | **Case scenario:** Hepatitis serology tests are added to the lab record for <HCR1> (Test case 1a) after uploading to eHealth. The serology tests are standardized tests (mapped with LOINC codes). Upload the lab record when the newly added test results are ready, details as follows:  Expected data contents for Level 3 lab record:  **Laboratory test request data**   * Laboratory test order number = 99087819043:OR12345678 * Laboratory test request healthcare institution identifier = [source system provided] * Laboratory test request healthcare institution long name = [source system provided] * Laboratory test request healthcare institution local name = Dr CHAN Medical Centre * (Updated) Panel local code = RFT\_eGFR\_HBVSero * (Updated) Panel local description = Renal Function Tests & eGFR, Hepatitis Serology Tests   **Laboratory result general information data**   * Laboratory test request performing laboratory name = ABC Laboratory * Laboratory test request number = 24GX0011 * Laboratory category code = GEOT * Laboratory category description = General & Other * Laboratory category local description = General Laboratory * Laboratory report status code = F * Laboratory report status description = Final report * Laboratory report status local description = Original report * Laboratory report reference datetime = 10-Jul-2024 14:33:00   **Specimen data**   * Specimen collection datetime = 10-Jul-2024 14:33:00 * Specimen arrival datetime = 10-Jul-2024 14:33:00 * Specimen type local description = Blood   **General Laboratory test result data**  Lab Test Result 1   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 22664-7 * Laboratory test name description - recognised terminology = Urea [Moles/volume] in Serum or Plasma * Laboratory test name local code = UREA * Laboratory test name local description = Urea * Laboratory Test Result Type = 1 * Laboratory test numeric result = 9.0 * Laboratory test reportable result = 9.0 * Laboratory test usable result = 9.0 * Laboratory test result unit = mmol/L * Laboratory test reference range = 3.0 - 9.2   Lab Test Result 2   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 14682-9 * Laboratory test name description - recognised terminology = Creatinine [Moles/volume] in Serum or Plasma * Laboratory test name local code = CR * Laboratory test name local description = Creatinine * Laboratory Test Result Type = 1 * Laboratory test numeric result = 158 * Laboratory test reportable result = 158 * Laboratory test usable result = 158 * Laboratory test result unit = umol/L * Laboratory test reference range = 65 - 104 * Abnormal result indicator code = H * Abnormal result indicator description = High * Abnormal result indicator local description = High   Lab Test Result 3   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 62238-1 * Laboratory test name description - recognised terminology = Glomerular filtration rate/1.73 sq M.predicted [Volume Rate/Area] in Serum or Plasma by Creatinine-based formula (CKD-EPI) Laboratory test name local code = EGFR * Laboratory test name local description = eGFR (by CKD-EPI Calc) * Laboratory Test Result Type = 1 * Laboratory test numeric result = 39 * Laboratory test reportable result = 39 * Laboratory test usable result = 39 * Laboratory test result unit = mL/min/1.73m sq * Laboratory test reference range = > 60 * Abnormal result indicator code = L * Abnormal result indicator description = Low * Abnormal result indicator local description = Lo * Laboratory test result note = 1. Estimated GFR (eGFR) is a calculated by default using the Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI) equation for non-African Americans. For African Americans, multiply by 1.159 fpr the eGFR, using the same reference range. * 2. The eGFR equation is not accurate for results > 60 mL/min/ 1.73m sq; therefore, values above this, although reported, should not be regarded as an exact value.   Lab Test Result 4   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 2951-2 * Laboratory test name description - recognised terminology = Sodium [Moles/volume] in Serum or Plasma * Laboratory test name local code = NA * Laboratory test name local description = Sodium * Laboratory Test Result Type = 1 * Laboratory test numeric result = 142 * Laboratory test reportable result = 142 * Laboratory test usable result = 142 * Laboratory test result unit = mmol/L * Laboratory test reference range = 135 - 145   Lab Test Result 5   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 2823-3 * Laboratory test name description - recognised terminology = Potassium [Moles/volume] in Serum or Plasma * Laboratory test name local code = K * Laboratory test name local description = Potassium * Laboratory Test Result Type = 1 * Laboratory test numeric result = 3.9 * Laboratory test reportable result = 3.9 * Laboratory test usable result = 3.9 * Laboratory test result unit = mmol/L * Laboratory test reference range = 3.5 - 5.3   (Added) Lab Test Result 6   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 5195-3 * Laboratory test name description - recognised terminology = Hepatitis B virus surface Ag [Presence] in Serum * Laboratory test name local code = HBSAG * Laboratory test name local description = HBsAg * Laboratory Test Result Type = 2 * Laboratory test enumerate result = Negative * Laboratory test reportable result = Negative * Laboratory test reference range = Negative   (Added) Lab Test Result 7   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 22322-2 * Laboratory test name description - recognised terminology = Hepatitis B virus surface Ab [Presence] in Serum * Laboratory test name local code = HBSAB * Laboratory test name local description = HBsAb * Laboratory Test Result Type = 2 * Laboratory test enumerate result = Positive * Laboratory test reportable result = Positive 46.3 * Laboratory test result unit = IU/L * Laboratory test reference range = Positive if ≥10   **Laboratory report data**   * Laboratory report (PDF) = [Generated PDF report with the above data and file name] * File indicator = 1 * File name = [PDF file name upload by HCP] * (Updated) Laboratory report date = 16-Jul-2024 14:30   == Actual data values (Refer to “Appendix - Actual Data Values (Sample)” for details)  Expected result:   1. Data Upload without problem 2. Lab record will pass Level 3 data validation 3. The Laboratory structure data will be shown in the Laboratory Record Module of eHR Viewer (EVE):    1. At Laboratory Cumulative Result(s):       1. All lab tests are mapped with valid LOINC codes & descriptions. The lab test results 1 – 7 will be shown with their corresponding eHR test names (Level 3 data)       2. Out-ranged Creatinine result is highlighted in red with abnormal result indicator ↑    2. At Laboratory Details:       1. All lab test results 1 – 7 will be shown with their local test name (Level 2 data) 4. The updated report image with all test results 1- 7 will be shown in the eHR Viewer (EVE). |
| 2b | **Case scenario**: Amend the Alk. Phosphatase test result in test case 1(b) for <HCR2> in the LIS, details as follows:  Expected data contents for Level 3 lab record:  **Laboratory test request data**   * Laboratory test order number = 99087819043:OR11112222 * Laboratory test request healthcare institution identifier = [source system provided] * Laboratory test request healthcare institution long name = [source system provided] * Laboratory test request healthcare institution local name = Dr CHAN Medical Centre * Panel local code = LFT\_CA199 * Panel local description = Liver Function Test & CA 19.9   **Laboratory result general information data**   * Laboratory test request performing laboratory name = ABC Laboratory * Laboratory test request number = 24CP10111 * Laboratory category code = GEOT * Laboratory category description = General & Other * Laboratory category local description = General Laboratory * Laboratory report status code = F * Laboratory report status description = Final report * Laboratory report status local description = Original report * Laboratory report reference datetime = 22-Aug-2024 13:01:00   **Specimen data**   * Specimen collection datetime = 22-Aug-2024 13:01:00 * Specimen arrival datetime = 22-Aug-2024 16:00:00 * Specimen type local description = Blood   **General Laboratory test result data**  Lab Test Result 1   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 14631-6 * Laboratory test name description - recognised terminology = Bilirubin.total [Moles/volume] in Serum or Plasma * Laboratory test name local code = TBIL * Laboratory test name local description = Total Bilirubin * Laboratory Test Result Type = 1 * Laboratory test numeric result = 7 * Laboratory test reportable result = 7 * Laboratory test usable result = 7 * Laboratory test result unit = umol/L * Laboratory test reference range = ≤18   Lab Test Result 2   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 1742-6 * Laboratory test name description - recognised terminology = * Alanine aminotransferase [Enzymatic activity/volume] in Serum or Plasma * Laboratory test name local code = ALT * Laboratory test name local description = ALT (GPT) * Laboratory Test Result Type = 1 * Laboratory test numeric result = 33 * Laboratory test reportable result = 33 * Laboratory test usable result = 33 * Laboratory test result unit = U/L * Laboratory test reference range = ≤86 * Laboratory test result note = Note: New pediatric reference intervals for ALT (GPT) applied as of 07 Mar 2017   Lab Test Result 3   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 6768-6 * Laboratory test name description - recognised terminology = Alkaline phosphatase [Enzymatic activity/volume] in Serum or Plasma * Laboratory test name local code = ALKPHOS * Laboratory test name local description = Alk. Phosphatase * Laboratory Test Result Type = 1 * (Updated) Laboratory test numeric result = 100 * (Updated) Laboratory test reportable result = 100 * (Updated) Laboratory test usable result = 100 * Laboratory test result unit = U/L * Laboratory test reference range = 43-105 * (Removed Abnormal result indicator code, Abnormal result indicator description, Abnormal result indicator local description that have been given in test case 1(b))   Lab Test Result 4   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 2885-2 * Laboratory test name description - recognised terminology = Protein [Mass/volume] in Serum or Plasma * Laboratory test name local code = TP * Laboratory test name local description = Total Protein * Laboratory Test Result Type = 1 * Laboratory test numeric result = 73 * Laboratory test reportable result = 73 * Laboratory test usable result = 73 * Laboratory test result unit = g/L * Laboratory test reference range = 66-80 * Laboratory test result note = Note: Total protein concentration is 4 - 8 g/L lower from patient in the recumbent rather than ambulatory status   Lab Test Result 5   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 1751-7 * Laboratory test name description - recognised terminology = Albumin [Mass/volume] in Serum or Plasma * Laboratory test name local code = ALB * Laboratory test name local description = Albumin * Laboratory Test Result Type = 1 * Laboratory test numeric result = 47 * Laboratory test reportable result = 47 * Laboratory test usable result = 47 * Laboratory test result unit = g/L * Laboratory test reference range = 35-52   Lab Test Result 6   * (Updated) Laboratory test name - recognised terminology name = LOINC * (Updated) Laboratory test name identifier - recognised terminology = 24108-3 * (Updated) Laboratory test name description - recognised terminology = Cancer Ag 19-9 [Units/volume] in Serum or Plasma * Laboratory test name local code = CA199 * Laboratory test name local description = CA 19.9 (Pancreas) * Laboratory Test Result Type = 1 * Laboratory test numeric result = 15.1 * Laboratory test reportable result = 15.1 * Laboratory test usable result = 15.1 * Laboratory test result unit = kU/L * Laboratory test reference range = ≤37.0   **Laboratory report data**   * Laboratory report (PDF) = [Generated PDF report with the above data and file name] * File indicator = 1 * File name = [PDF file name upload by HCP] * (Updated) Laboratory report date = 25-Aug-2024 17:10   == Actual data values (Refer to “Appendix - Actual Data Values (Sample)” for details)  Expected result:   * Data Upload without any problems * Lab record can pass Level 3 data validation as LOINC mapping is given for lab test CA 19.9 in the updated record. * The Laboratory structure data will be shown in the Laboratory Record Module of eHR Viewer (EVE) :   + At Laboratory Cumulative Result(s):     - All lab tests are mapped with valid LOINC codes & descriptions. Test results 1 – 6 will be shown with their corresponding eHR test names (Level 3 data)     - Alk. Phosphatase result is shown as normal (value in black and without abnormal result indicator ↑) after the amendment.   + At Laboratory Details:     - All lab test results 1 – 6 will be shown with their local test name (Level 2 data) * The updated PDF file with all test results 1- 6 will be shown in the eHR Viewer (EVE). |
| 2c | **Case scenario**: Delete test case 1(c) which has been uploaded for <HCR3>  == Actual data values (Refer to “Appendix - Actual Data Values (Sample)” for details)  **Expected result:**   1. The previous uploaded record will not be found in the eHR Viewer (EVE). 2. Batch 2 Data file will contain 1 Delete transaction for record 1(c). (Test results should be compared with provided results <*DF and DF\_INS message files>* as attached be Appendix 3 Sample Messages) |
| 2d | **Case scenario**:  LFT structured data and report image together with CA 242 send-out test report image has been uploaded as a single record in test case 1(d) for <HCR4>.  Remove the CA 242 report image from test case 1(d) and re-upload the record under the same eHR record key. Upload the CA 242 report image as a separate lab record with a new eHR record key.  Expected data contents for Level 3 record:   1. **Lab Record 1 – LFT structured test results and report image (in-house test)**   **Laboratory test request data**   * Laboratory test order number = 99087819043:OR10999546 * Laboratory test request healthcare institution identifier = [source system provided] * Laboratory test request healthcare institution long name = [source system provided] * Laboratory test request healthcare institution local name = Dr CHAN Medical Centre * (Updated) Panel local code = LFT * (Updated) Panel local description = Liver Function Tests   **Laboratory result general information data**   * Laboratory test request performing laboratory name = ABC Laboratory * Laboratory test request number = 24CP9992341 * Laboratory category code = GEOT * Laboratory category description = General & Other * Laboratory category local description = General Laboratory * Laboratory report status code = F * Laboratory report status description = Final report * Laboratory report status local description = Original report * Laboratory report reference datetime = 03-Oct-2024 10:20:00 * Laboratory report comment = CA 242 has been sent to XYZ Laboratory for further investigation. Please refer to the results in the XYZ Laboratory report.   **Specimen data**   * Specimen collection datetime = 03-Oct-2024 10:20:00 * Specimen arrival datetime = 03-Oct-2024 12:30:00 * Specimen type local description = Blood   **General Laboratory test result data (Lab Test Result 1 - 5)**  Lab Test Result 1   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 14631-6 * Laboratory test name description - recognised terminology = Bilirubin.total [Moles/volume] in Serum or Plasma * Laboratory test name local code = TBIL * Laboratory test name local description = Total Bilirubin * Laboratory Test Result Type = 1 * Laboratory test numeric result = 19 * Laboratory test reportable result = 19 * Laboratory test usable result = 19 * Laboratory test result unit = umol/L * Laboratory test reference range = ≤18 * Abnormal result indicator code = H * Abnormal result indicator description = High * Abnormal result indicator local description = High   Lab Test Result 2   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 1742-6 * Laboratory test name description - recognised terminology = * Alanine aminotransferase [Enzymatic activity/volume] in Serum or Plasma * Laboratory test name local code = ALT * Laboratory test name local description = ALT (GPT) * Laboratory Test Result Type = 1 * Laboratory test numeric result = 100 * Laboratory test reportable result = 100 * Laboratory test usable result = 100 * Laboratory test result unit = U/L * Laboratory test reference range = ≤86 * Abnormal result indicator code = H * Abnormal result indicator description = High * Abnormal result indicator local description = High * Laboratory test result note = Note: New pediatric reference intervals for ALT (GPT) applied as of 07 Mar 2017   Lab Test Result 3   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 6768-6 * Laboratory test name description - recognised terminology = Alkaline phosphatase [Enzymatic activity/volume] in Serum or Plasma * Laboratory test name local code = ALKPHOS * Laboratory test name local description = Alk. Phosphatase * Laboratory Test Result Type = 1 * Laboratory test numeric result = 110 * Laboratory test reportable result = 110 * Laboratory test usable result = 110 * Laboratory test result unit = U/L * Laboratory test reference range = 43-105 * Abnormal result indicator code = H * Abnormal result indicator description = High * Abnormal result indicator local description = High   Lab Test Result 4   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 2885-2 * Laboratory test name description - recognised terminology = Protein [Mass/volume] in Serum or Plasma * Laboratory test name local code = TP * Laboratory test name local description = Total Protein * Laboratory Test Result Type = 1 * Laboratory test numeric result = 50 * Laboratory test reportable result = 50 * Laboratory test usable result = 50 * Laboratory test result unit = g/L * Laboratory test reference range = 66-80 * Abnormal result indicator code = L * Abnormal result indicator description = Low * Abnormal result indicator local description = Low * Laboratory test result note = Note: Total protein concentration is 4 - 8 g/L lower from patient in the recumbent rather than ambulatory status   Lab Test Result 5   * Laboratory test name - recognised terminology name = LOINC * Laboratory test name identifier - recognised terminology = 1751-7 * Laboratory test name description - recognised terminology = Albumin [Mass/volume] in Serum or Plasma * Laboratory test name local code = ALB * Laboratory test name local description = Albumin * Laboratory Test Result Type = 1 * Laboratory test numeric result = 31 * Laboratory test reportable result = 31 * Laboratory test usable result = 31 * Laboratory test result unit = g/L * Laboratory test reference range = 35-52 * Abnormal result indicator code = L * Abnormal result indicator description = Low * Abnormal result indicator local description = Low   **Laboratory report data**  Lab Report 1   * Laboratory report (PDF) = [Generated PDF report with the above data and file name] * File indicator = 1 * File name = [PDF file name upload by HCP] * Laboratory report date = 3-Oct-2024 17:00   (Removed Lab Report 2)   1. **Lab Record 2 – CA 242 report image (Send-out test)**   **Laboratory test request data**   * Laboratory test order number = 99087819043:OR10999546 * Laboratory test request healthcare institution identifier = [source system provided] * Laboratory test request healthcare institution long name = [source system provided] * (Updated) Laboratory test request healthcare institution local name = ABC Laboratory * (Updated) Panel local code = CA242 * (Updated) Panel local description = CA 242   **Laboratory result general information data**   * (Updated) Laboratory test request performing laboratory name = XYZ Laboratory * (Updated) Laboratory test request number = 24XYZ0010362 * Laboratory category code = GEOT * Laboratory category description = General & Other * Laboratory category local description = General Laboratory * Laboratory report status code = F * Laboratory report status description = Final report * Laboratory report status local description = Original report * Laboratory report reference datetime = 03-Oct-2024 10:20:00 * (Remove Laboratory report comment)   **Laboratory report data**  Lab Report 2   * Laboratory report (PDF) = [Generated PDF report with the above data and file name] * File indicator = 1 * File name = [PDF file name upload by HCP] * Laboratory report date = 6-Oct-2024 09:10   == Actual data values (Refer to “Appendix - Actual Data Values (Sample)” for details)  Expected result:   1. Data Upload without any problems 2. If both records are declared as Level 3 records during the upload, only the LFT record with both structured test results and report image will pass the Level 3 data validation. CA 242 record which has report image without structured test results will be regraded to Level 1, unless the record is declared as Level 1 records during the upload. 3. Both records will be shown in the Laboratory Record Module of eHR Viewer (EVE) :   Lab Record 1 – LFT structured test results and report image (in-house test)   * 1. For Laboratory Cumulative Result(s):      + All 5 lab tests are mapped with valid LOINC codes & descriptions. The test results 1 – 5 will be shown with their corresponding eHR test names (Level 3 data)      + All LFT tests are out-ranged and will be highlighted in red with abnormal result indicators ↑ or ↓   2. At Laboratory Details:      + Test Result 1 – 5 will be shown with their local test name (Level 2 data)   Lab Record 2 – CA 242 report image (Send-out test)   1. At Laboratory Cumulative Result(s):    * + No Structured test result shown 2. At Laboratory Details:    * + No Structured test result shown 3. The report images for LFT and CA 242 will be shown as two separated PDF files in the eHR Viewer (EVE).PDF |
|  | **Expected eMR System Behavior** | 1. HCP’s eMR system will upload **Batch 2** data file with all LABGEN records of created in **2a-2d (Level 3 data)** by INC mode. 2. **Batch 2** data files should include below files: <[sample](#_Appendix_–_Sample)>    1. Participant List (PL)    2. Data Files (DFs)    3. HL7 message with signature    4. Zip File (embedded PL, DFs and HL7 message files)    5. Zip Control File (contains the filenames of PL, DFs and HL7 message) 3. eMR system uploads **Batch 2** data files (‘Zip File’ and ‘Zip Control File') to eHealth. 4. HCP verifies the data upload status by reviewing the 'Process Summary Report' and 'Exception Report' in eHR Inbox. 5. HCP verifies the completeness and correctness of data uploaded in eHR Viewer. | |
|  | **Results Verification** | * HCP verifies if the uploaded records can be properly viewed in eHR Viewer (EVE) and reviews if the data batches uploaded can be processed successfully or rejected through ‘Process Summary’, ‘Exception Report’ and ‘Re-grade Report’ in eHR Inbox. | |
| **Actual Result**  **(Screenshot / Attachment)** | **Data Files Uploaded:**  *<Attached the Zip file and Control file; password to unzip the file>* | |
| **Attachment/Screenshot:**  *<Attached the screen shots of records uploaded in eHR Viewers>* | |
| **Remark** | *<State your reasons/ justification for exemption with case number>* | |
| **Testing Date** | *<Provided by HCP>* | |
| **Verified By** | *<Provided by HCP>* | |

| **3** | **Test Case ID** | LABGEN-LV2-001 [FOR LEVEL 2 DATA UPLOAD ONLY] |
| --- | --- | --- |
|  | **Function Description** | HCP received sharing consents from testing HCRs, then perform the first data upload of HCRs’ laboratory records to eHealth by DM Mode for Level 2 data. |
| **Subsequent case of** | N/A |
| **Testing Assumption** | * HCR1-HCR4 have already given sharing consents to the HCP. * The eMR system contains laboratory records of these HCRs and will upload all the laboratory (general) records of <HCR1> - <HCR4> to eHealth in Batch 1 data files created by DM mode. |
| **Test Actions** | HCP creates below LABGEN records in the local lab information system (LIS): |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | 3a | **Case scenario**: Register the lab test request of renal function tests (RFT) with eGFR in LIS for <HCR1>. Upload the lab record with structured lab test results and report image when all results are ready, details as follows:  Expected data contents for Level 2 lab record:  **Laboratory test request data**   * Laboratory test order number = 99087819043:OR12345678 * Laboratory test request healthcare institution identifier = [source system provided] * Laboratory test request healthcare institution long name = [source system provided] * Laboratory test request healthcare institution local name = Dr CHAN Medical Centre * Panel local code = RFT\_eGFR * Panel local description = Renal Function Tests & eGFR   **Laboratory result general information data**   * Laboratory test request performing laboratory name = ABC Laboratory * Laboratory test request number = 24GX0011 * Laboratory category code = GEOT * Laboratory category description = General & Other * Laboratory category local description = General Laboratory * Laboratory report status code = F * Laboratory report status description = Final report * Laboratory report status local description = Original report * Laboratory report reference datetime = 10-Jul-2024 14:33:00   **Specimen data**   * Specimen collection datetime = 10-Jul-2024 14:33:00 * Specimen arrival datetime = 10-Jul-2024 14:33:00 * Specimen type local description = Blood   **General Laboratory test result data (Lab test result 1 – 5)**  Lab Test Result 1   * Laboratory test name local code = UREA * Laboratory test name local description = Urea * Laboratory Test Result Type = 1 * Laboratory test numeric result = 9.0 * Laboratory test reportable result = 9.0 * Laboratory test usable result = 9.0 * Laboratory test result unit = mmol/L * Laboratory test reference range = 3.0 - 9.2   Lab Test Result 2   * Laboratory test name local code = CR * Laboratory test name local description = Creatinine * Laboratory Test Result Type = 1 * Laboratory test numeric result = 158 * Laboratory test reportable result = 158 * Laboratory test usable result = 158 * Laboratory test result unit = umol/L * Laboratory test reference range = 65 - 104 * Abnormal result indicator code = H * Abnormal result indicator description = High * Abnormal result indicator local description = High   Lab Test Result 3   * Laboratory test name local description = eGFR (by CKD-EPI Calc) * Laboratory Test Result Type = 1 * Laboratory test numeric result = 39 * Laboratory test reportable result = 39 * Laboratory test usable result = 39 * Laboratory test result unit = mL/min/1.73m sq * Laboratory test reference range = > 60 * Abnormal result indicator code = L * Abnormal result indicator description = Low * Abnormal result indicator local description = Lo * Laboratory test result note = 1. Estimated GFR (eGFR) is a calculated by default using the Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI) equation for non-African Americans. For African Americans, multiply by 1.159 for the eGFR, using the same reference range. * 2. The eGFR equation is not accurate for results > 60 mL/min/ 1.73m sq; therefore, values above this, although reported, should not be regarded as an exact value.   Lab Test Result 4   * Laboratory test name local code = NA * Laboratory test name local description = Sodium * Laboratory Test Result Type = 1 * Laboratory test numeric result = 142 * Laboratory test reportable result = 142 * Laboratory test usable result = 142 * Laboratory test result unit = mmol/L * Laboratory test reference range = 135 - 145   Lab Test Result 5   * Laboratory test name local code = K * Laboratory test name local description = Potassium * Laboratory Test Result Type = 1 * Laboratory test numeric result = 3.9 * Laboratory test reportable result = 3.9 * Laboratory test usable result = 3.9 * Laboratory test result unit = mmol/L * Laboratory test reference range = 3.5 - 5.3   **Laboratory report data**   * Laboratory report (PDF) = [Generated PDF report with the above data and file name] * File indicator = 1 * File name = [PDF file name upload by HCP] * Laboratory report date = 15-Jul-2024 19:03   == Actual data values (Refer to “Appendix - Actual Data Values (Sample)” for details)  Expected result:   1. Data Upload without problem 2. Lab record will pass Level 2 data validation 3. The Laboratory record will be shown in the Laboratory Record Module of eHR Viewer (EVE): 4. At Laboratory Cumulative Result(s):    * 1. All test results 1 – 5 will be shown with their local test names (Level 2 data)      2. Out-ranged Creatinine result is highlighted in red with abnormal result indicator ↑ 5. At Laboratory Details:    * 1. All lab test results 1 – 5 will be shown with their local test names (Level 2 data) 6. The report image will be shown in the eHR Viewer (EVE). |
| 3b | **Case scenario**: Register the lab test request of liver function tests (LFT) with CA 19.9 test in LIS for <HCR2>. CA 19.9 test result is not available, i.e. its test name, test unit and its reference range are given without providing laboratory test reportable result and laboratory test result note. There is no laboratory report comment for the uploaded record. Upload the lab record with structured lab test results and report image when all results are ready, details as follows:  Expected data contents for Level 2 lab record:  **Laboratory test request data**   * Laboratory test order number = 99087819043:OR11112222 * Laboratory test request healthcare institution identifier = [source system provided] * Laboratory test request healthcare institution long name = [source system provided] * Laboratory test request healthcare institution local name = Dr CHAN Medical Centre * Panel local code = LFT\_CA199 * Panel local description = Liver Function Tests & CA 19.9   **Laboratory result general information data**   * Laboratory test request performing laboratory name = ABC Laboratory * Laboratory test request number = 24CP10111 * Laboratory category code = GEOT * Laboratory category description = General & Other * Laboratory category local description = General Laboratory * Laboratory report status code = F * Laboratory report status description = Final report * Laboratory report status local description = Original report * Laboratory report reference datetime = 22-Aug-2024 13:01:00   **Specimen data**   * Specimen collection datetime = 22-Aug-2024 13:01:00 * Specimen arrival datetime = 22-Aug-2024 16:00:00 * Specimen type local description = Blood   **General Laboratory test result data (Lab test result 1 – 6)**  Lab Test Result 1   * Laboratory test name local code = TBIL * Laboratory test name local description = Total Bilirubin * Laboratory Test Result Type = 1 * Laboratory test numeric result = 7 * Laboratory test reportable result = 7 * Laboratory test usable result = 7 * Laboratory test result unit = umol/L * Laboratory test reference range = ≤18   Lab Test Result 2   * Laboratory test name local code = ALT * Laboratory test name local description = ALT (GPT) * Laboratory Test Result Type = 1 * Laboratory test numeric result = 33 * Laboratory test reportable result = 33 * Laboratory test usable result = 33 * Laboratory test result unit = U/L * Laboratory test reference range = ≤86 * Laboratory test result note = Note: New pediatric reference intervals for ALT (GPT) applied as of 07 Mar 2017   Lab Test Result 3   * Laboratory test name local code = ALKPHOS * Laboratory test name local description = Alk. Phosphatase * Laboratory Test Result Type = 1 * Laboratory test numeric result = 119 * Laboratory test reportable result = 119 * Laboratory test usable result = 119 * Laboratory test result unit = U/L * Laboratory test reference range = 43-105 * Abnormal result indicator code = H * Abnormal result indicator description = High * Abnormal result indicator local description = High   Lab Test Result 4   * Laboratory test name local code = TP * Laboratory test name local description = Total Protein * Laboratory Test Result Type = 1 * Laboratory test numeric result = 73 * Laboratory test reportable result = 73 * Laboratory test usable result = 73 * Laboratory test result unit = g/L * Laboratory test reference range = 66-80 * Laboratory test result note = Note: Total protein concentration is 4 - 8 g/L lower from patient in the recumbent rather than ambulatory status   Lab Test Result 5   * Laboratory test name local code = ALB * Laboratory test name local description = Albumin * Laboratory Test Result Type = 1 * Laboratory test numeric result = 47 * Laboratory test reportable result = 47 * Laboratory test usable result = 47 * Laboratory test result unit = g/L * Laboratory test reference range = 35-52   Lab Test Result 6   * Laboratory test name local code = CA199 * Laboratory test name local description = CA 19.9 (Pancreas) * Laboratory Test Result Type = <Null> * Laboratory test numeric result = <Null> * Laboratory test reportable result = <Null> * Laboratory test usable result = <Null> * Laboratory test result unit = kU/L * Laboratory test reference range = ≤37.0   **Laboratory report data**   * Laboratory report (PDF) = [Generated PDF report with the above data and file name] * File indicator = 1 * File name = [PDF file name upload by HCP] * Laboratory report date = 23-Aug-2024 09:10   == Actual data values (Refer to “Appendix - Actual Data Values (Sample)” for details)  Expected result:   1. Data Upload without problem 2. Lab record will be regraded from Level 2 to Level 1 due to the absence of laboratory test reportable result and Laboratory test result note for lab test CA 19.9, and also lack of a laboratory test report comment for the uploaded record. 3. The Laboratory structure data will be shown in the Laboratory Record Module of eHR Viewer (EVE) :    1. At Laboratory Cumulative Result(s):       * No structured test results will be shown as the record is regraded to Level 1    2. At Laboratory Details:       * No structured test results will be shown as the record is regraded to Level 1 4. The report image will be shown in the eHR Viewer (EVE). |
| 3c | **Case scenario**: Register the lab test request of fasting glucose in LIS for <HCR3>. Upload the lab record with structured lab test result and report image when the result is ready, details as follows:  Expected data contents for Level 2 record:  **Laboratory test request data**   * Laboratory test order number = 99087819043:OR33335678 * Laboratory test request healthcare institution identifier = [source system provided] * Laboratory test request healthcare institution long name = [source system provided] * Laboratory test request healthcare institution local name = Dr CHAN Medical Centre * Panel local code = FG * Panel local description = Fasting Glucose   **Laboratory result general information data**   * Laboratory test request performing laboratory name = ABC Laboratory * Laboratory test request number = 24CP61234 * Laboratory category code = GEOT * Laboratory category description = General & Other * Laboratory category local description = General Laboratory * Laboratory report status code = F * Laboratory report status description = Final report * Laboratory report status local description = Original report * Laboratory report reference datetime = 22-Sep-2024 14:15:00   **Specimen data**   * Specimen collection datetime = 22-Sep-2024 14:15:00 * Specimen arrival datetime = 22-Sep-2024 16:30:00 * Specimen type local description = Blood   **General Laboratory test result data**  Lab Test Result 1   * Laboratory test name local code = FG * Laboratory test name local description = Glucose, Fasting * Laboratory Test Result Type = 1 * Laboratory test numeric result = 7.5 * Laboratory test reportable result = 7.5 * Laboratory test usable result = 7.5 * Laboratory test result unit = mmol/L * Laboratory test reference range = 3.6 - 6.0 * Abnormal result indicator code = H * Abnormal result indicator description = High * Abnormal result indicator local description = High   **Laboratory report data**   * Laboratory report (PDF) = [Generated PDF report with the above data and file name] * File indicator = 1 * File name = [PDF file name upload by HCP]   == Actual data values (Refer to “Appendix - Actual Data Values (Sample)” for details)  Expected result:   1. Data Upload without problem 2. Lab record will pass Level 2 data validation 3. The Laboratory structure data will be shown in the Laboratory Record Module of eHR Viewer (EVE): 4. At Laboratory Cumulative Result(s):    * + Fasting Glucose test result will be shown with its local test name (Level 2 data)      + Out-ranged Glucose result is highlighted in red with abnormal result indicator ↑ 5. At Laboratory Details:    * + Glucose test result will be shown with its local test name (Level 2 data) 6. The report image will be shown in the eHR Viewer (EVE). |
| 3d | **Case scenario**: Register lab test request of liver function tests (LFT) and CA 242 for <HCR4>. LFT are performed by HCP and test results are reported in LIS. The CA 242 test has been sent out to another lab for testing. When the send-out test CA 242 is available, the referred lab will return the report image in PDF format a few days later.  Upload the LFT structured test results and report image together with CA 242 report image as a single record when all results are ready, details as follows:  Expected data contents for Level 2 lab record:  **Laboratory test request data**   * Laboratory test order number = 99087819043:OR10999546 * Laboratory test request healthcare institution identifier = [source system provided] * Laboratory test request healthcare institution long name = [source system provided] * Laboratory test request healthcare institution local name = Dr CHAN Medical Centre * Panel local code = LFT\_CA242 * Panel local description = Liver Function Tests & CA 242   **Laboratory result general information data**   * Laboratory test request performing laboratory name = ABC Laboratory * Laboratory test request number = 24CP9992341 * Laboratory category code = GEOT * Laboratory category description = General & Other * Laboratory category local description = General Laboratory * Laboratory report status code = F * Laboratory report status description = Final report * Laboratory report status local description = Original report * Laboratory report reference datetime = 03-Oct-2024 10:20:00 * Laboratory report comment = CA 242 has been sent to XYZ Laboratory for further investigation. Please refer to the result in the XYZ Laboratory report.   **Specimen data**   * Specimen collection datetime = 03-Oct-2024 10:20:00 * Specimen arrival datetime = 03-Oct-2024 12:30:00 * Specimen type local description = Blood   **General Laboratory test result data (Lab Test Result 1 - 5)**  Lab Test Result 1   * Laboratory test name local code = TBIL * Laboratory test name local description = Total Bilirubin * Laboratory Test Result Type = 1 * Laboratory test numeric result = 19 * Laboratory test reportable result = 19 * Laboratory test usable result = 19 * Laboratory test result unit = umol/L * Laboratory test reference range = ≤18 * Abnormal result indicator code = H * Abnormal result indicator description = High * Abnormal result indicator local description = High   Lab Test Result 2   * Laboratory test name local code = ALT * Laboratory test name local description = ALT (GPT) * Laboratory Test Result Type = 1 * Laboratory test numeric result = 100 * Laboratory test reportable result = 100 * Laboratory test usable result = 100 * Laboratory test result unit = U/L * Laboratory test reference range = ≤86 * Abnormal result indicator code = H * Abnormal result indicator description = High * Abnormal result indicator local description = High * Laboratory test result note = Note: New pediatric reference intervals for ALT (GPT) applied as of 07 Mar 2017   Lab Test Result 3   * Laboratory test name local code = ALKPHOS * Laboratory test name local description = Alk. Phosphatase * Laboratory Test Result Type = 1 * Laboratory test numeric result = 110 * Laboratory test reportable result = 110 * Laboratory test usable result = 110 * Laboratory test result unit = U/L * Laboratory test reference range = 43-105 * Abnormal result indicator code = H * Abnormal result indicator description = High * Abnormal result indicator local description = High   Lab Test Result 4   * Laboratory test name local code = TP * Laboratory test name local description = Total Protein * Laboratory Test Result Type = 1 * Laboratory test numeric result = 50 * Laboratory test reportable result = 50 * Laboratory test usable result = 50 * Laboratory test result unit = g/L * Laboratory test reference range = 66-80 * Abnormal result indicator code = L * Abnormal result indicator description = Low * Abnormal result indicator local description = Low * Laboratory test result note = Note: Total protein concentration is 4 - 8 g/L lower from patient in the recumbent rather than ambulatory status   Lab Test Result 5   * Laboratory test name local code = ALB * Laboratory test name local description = Albumin * Laboratory Test Result Type = 1 * Laboratory test numeric result = 31 * Laboratory test reportable result = 31 * Laboratory test usable result = 31 * Laboratory test result unit = g/L * Laboratory test reference range = 35-52 * Abnormal result indicator code = L * Abnormal result indicator description = Low * Abnormal result indicator local description = Low   **Laboratory report data**  Lab Report 1   * Laboratory report (PDF) = [Generated PDF report with the above data and file name] * File indicator = 1 * File name = [PDF file name upload by HCP] * Laboratory report date = 3-Oct-2024 17:00   Lab Report 2   * Laboratory report (PDF) = [Generated PDF report with the above data and file name] * File indicator = 1 * File name = [PDF file name upload by HCP] * Laboratory report date = 6-Oct-2024 09:10   == Actual data values (Refer to “Appendix - Actual Data Values (Sample)” for details)  Expected result:   1. Data Upload without any problems 2. Lab record can pass Level 2 data validation 3. The Laboratory structure data will be shown in the Laboratory Record Module of eHR Viewer (EVE) :    1. For Laboratory Cumulative Result(s):       * LFT results 1 – 5 will be shown with their local test names (Level 2 data)       * All LFT tests are out-ranged and will be highlighted in red with abnormal result indicators ↑ or ↓       * No structured test result for the send-out test CA 242. Test name and its result will not be shown.    2. At Laboratory Details:       * LFT results 1 – 5 will be shown with their local test name (Level 2 data)       * CA 242 test name and its result will not be shown 4. The report images for LFT and CA 242 will be combined as a PDF file to show in the eHR Viewer (EVE). |
|  | **Expected eMR System Behavior** | 1. HCP’s eMR system will upload **Batch 1** data fileswith all lab records of created in **1a-1d (Level 2 data)** by DM mode. 2. **Batch 1** data files should include below files: <[sample](#_Appendix_–_Sample)> 3. Participant List (PL) 4. Data File (DF) 5. HL7 message with signature 6. Zip File (embedded PL, DFs and HL7 message files) 7. Zip Control File (contains the filenames of PL, DFs and HL7 message) 8. eMR system uploads **Batch 1** data files (‘Zip File’ and ‘Zip Control File') to eHealth. 9. HCP verifies the data upload status by reviewing the 'Process Summary Report' and 'Exception Report' in eHR Inbox. 10. HCP verifies the completeness and correctness of data uploaded in eHR Viewer. | |
|  | **Results Verification** | * HCP verifies the interface file contents and check if the uploaded records can be properly viewed in eHR Viewer (EVE). HCP must also review if the data batches uploaded can be processed successfully from Process Summary, Data Exception Report or Data Regrade Report from eHR Inbox | |
| **Actual Result**  **(Screenshot / Attachment)** | **Data Files Uploaded:**  *<Attached the Zip file and Control file; password to unzip the file>* | |
| **Attachment/Screenshot:**  *<Attached the screen shots of records uploaded in eHR Viewers>* | |
| **Remark** | *<State your reasons/ justification for exemption with case number>* | |
| **Testing Date** | *<Provided by HCP>* | |
| **Verified By** | *<Provided by HCP>* | |

| **4** | **Test Case ID** | LABGEN-LV2-002 [FOR LEVEL 2 DATA UPLOAD ONLY] | |
| --- | --- | --- | --- |
|  | **Function Description** | There are subsequent changes in HCRs’ clinical records in Batch 1 data upload. HCP uploads incremental changes to eHealth by INC Mode for Level 2 data. | |
| **Subsequent cases of** | LABGEN-LV2-001 | |
| **Testing Assumption** | HCP has already verified that Batch 1 data have been processed successfully with correct test results. | |
| **Test Actions** | HCP updates lab records from Batch 1 in LIS as follows: | |
| 4a | **Case scenario:** Hepatitis serology tests are added to the lab record for <HCR1> (Test case 3a) after uploading to eHealth. Upload the lab record when the newly added test results are ready, details as follows:  Expected data contents for Level 2 lab record:  **Laboratory test request data**   * Laboratory test order number = 99087819043:OR12345678 * Laboratory test request healthcare institution identifier = [source system provided] * Laboratory test request healthcare institution long name = [source system provided] * Laboratory test request healthcare institution local name = Dr CHAN Medical Centre * (Updated) Panel local code = RFT\_eGFR\_HBVSero * (Updated) Panel local description = Renal Function Tests & eGFR, Hepatitis Serology Tests   **Laboratory result general information data**   * Laboratory test request performing laboratory name = ABC Laboratory * Laboratory test request number = 24GX0011 * Laboratory category code = GEOT * Laboratory category description = General & Other * Laboratory category local description = General Laboratory * Laboratory report status code = F * Laboratory report status description = Final report * Laboratory report status local description = Original report * Laboratory report reference datetime = 10-Jul-2024 14:33:00   **Specimen data**   * Specimen collection datetime = 10-Jul-2024 14:33:00 * Specimen arrival datetime = 10-Jul-2024 14:33:00 * Specimen type local description = Blood   **General Laboratory test result data**  Lab Test Result 1   * Laboratory test name local code = UREA * Laboratory test name local description = Urea * Laboratory Test Result Type = 1 * Laboratory test numeric result = 9.0 * Laboratory test reportable result = 9.0 * Laboratory test usable result = 9.0 * Laboratory test result unit = mmol/L * Laboratory test reference range = 3.0 - 9.2   Lab Test Result 2   * Laboratory test name local code = CR * Laboratory test name local description = Creatinine * Laboratory Test Result Type = 1 * Laboratory test numeric result = 158 * Laboratory test reportable result = 158 * Laboratory test usable result = 158 * Laboratory test result unit = umol/L * Laboratory test reference range = 65 - 104 * Abnormal result indicator code = H * Abnormal result indicator description = High * Abnormal result indicator local description = High   Lab Test Result 3   * Laboratory test name local description = eGFR (by CKD-EPI Calc) * Laboratory Test Result Type = 1 * Laboratory test numeric result = 39 * Laboratory test reportable result = 39 * Laboratory test usable result = 39 * Laboratory test result unit = mL/min/1.73m sq * Laboratory test reference range = > 60 * Abnormal result indicator code = L * Abnormal result indicator description = Low * Abnormal result indicator local description = Lo * Laboratory test result note = 1. Estimated GFR (eGFR) is a calculated by default using the Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI) equation for non-African Americans. For African Americans, multiply by 1.159 fpr the eGFR, using the same reference range. * 2. The eGFR equation is not accurate for results > 60 mL/min/ 1.73m sq; therefore, values above this, although reported, should not be regarded as an exact value.   Lab Test Result 4   * Laboratory test name local code = NA * Laboratory test name local description = Sodium * Laboratory Test Result Type = 1 * Laboratory test numeric result = 142 * Laboratory test reportable result = 142 * Laboratory test usable result = 142 * Laboratory test result unit = mmol/L * Laboratory test reference range = 135 - 145   Lab Test Result 5   * Laboratory test name local code = K * Laboratory test name local description = Potassium * Laboratory Test Result Type = 1 * Laboratory test numeric result = 3.9 * Laboratory test reportable result = 3.9 * Laboratory test usable result = 3.9 * Laboratory test result unit = mmol/L * Laboratory test reference range = 3.5 - 5.3   (Added) Lab Test Result 6   * Laboratory test name local code = HBSAG * Laboratory test name local description = HBsAg * Laboratory Test Result Type = 2 * Laboratory test enumerate result = Negative * Laboratory test reportable result = Negative * Laboratory test reference range = Negative   (Added) Lab Test Result 7   * Laboratory test name local code = HBSAB * Laboratory test name local description = HBsAb * Laboratory Test Result Type = 2 * Laboratory test enumerate result = Positive * Laboratory test reportable result = Positive 46.3 * Laboratory test result unit = IU/L * Laboratory test reference range = Positive if ≥10   **Laboratory report data**   * Laboratory report (PDF) = [Generated PDF report with the above data and file name] * File indicator = 1 * File name = [PDF file name upload by HCP] * (Updated) Laboratory report date = 16-Jul-2024 14:30   == Actual data values (Refer to “Appendix - Actual Data Values (Sample)” for details)  Expected result:   1. Data Upload without any problems 2. Lab record can pass Level 2 data validation 3. The Laboratory structure data will be shown in the Laboratory Record Module of eHR Viewer (EVE): 4. At Laboratory Cumulative Result(s):    * 1. The lab test results 1 – 7 will be shown with their local test names (Level 2 data)      2. Out-ranged Creatinine result is highlighted in red with abnormal result indicator ↑ 5. At Laboratory Details:    * 1. All lab test results 1 – 7 will be shown with their local test name (Level 2 data) 6. The updated report image with all test results 1- 7 will be shown in the eHR Viewer (EVE). |
| 4b | **Case scenario**: Amend the Alk. Phosphatase test result and add cancel remarks for CA 19.9 test in laboratory test result note in test case 3(b) for <HCR2> in the LIS, details as follows:  Expected data contents for Level 2 lab record:  **Laboratory test request data**   * Laboratory test order number = 99087819043:OR11112222 * Laboratory test request healthcare institution identifier = [source system provided] * Laboratory test request healthcare institution long name = [source system provided] * Laboratory test request healthcare institution local name = Dr CHAN Medical Centre * Panel local code = LFT\_CA199 * Panel local description = Liver Function Tests & CA 19.9   **Laboratory result general information data**   * Laboratory test request performing laboratory name = ABC Laboratory * Laboratory test request number = 24CP10111 * Laboratory category code = GEOT * Laboratory category description = General & Other * Laboratory category local description = General Laboratory * Laboratory report status code = F * Laboratory report status description = Final report * Laboratory report status local description = Original report * Laboratory report reference datetime = 22-Aug-2024 13:01:00   **Specimen data**   * Specimen collection datetime = 22-Aug-2024 13:01:00 * Specimen arrival datetime = 22-Aug-2024 16:00:00 * Specimen type local description = Blood   **General Laboratory test result data**  Lab Test Result 1   * Laboratory test name local code = TBIL * Laboratory test name local description = Total Bilirubin * Laboratory Test Result Type = 1 * Laboratory test numeric result = 7 * Laboratory test reportable result = 7 * Laboratory test usable result = 7 * Laboratory test result unit = umol/L * Laboratory test reference range = ≤18   Lab Test Result 2   * Laboratory test name local code = ALT * Laboratory test name local description = ALT (GPT) * Laboratory Test Result Type = 1 * Laboratory test numeric result = 33 * Laboratory test reportable result = 33 * Laboratory test usable result = 33 * Laboratory test result unit = U/L * Laboratory test reference range = ≤86 * Laboratory test result note = Note: New pediatric reference intervals for ALT (GPT) applied as of 07 Mar 2017   Lab Test Result 3   * Laboratory test name local code = ALKPHOS * Laboratory test name local description = Alk. Phosphatase * Laboratory Test Result Type = 1 * (Updated) Laboratory test numeric result = 100 * (Updated) Laboratory test reportable result = 100 * (Updated) Laboratory test usable result = 100 * Laboratory test result unit = U/L * Laboratory test reference range = 43-105 * (Removed Abnormal result indicator code, Abnormal result indicator description, Abnormal result indicator local description that have been given in test case 1(b))   Lab Test Result 4   * Laboratory test name local code = TP * Laboratory test name local description = Total Protein * Laboratory Test Result Type = 1 * Laboratory test numeric result = 73 * Laboratory test reportable result = 73 * Laboratory test usable result = 73 * Laboratory test result unit = g/L * Laboratory test reference range = 66-80 * Laboratory test result note = Note: Total protein concentration is 4 - 8 g/L lower from patient in the recumbent rather than ambulatory status   Lab Test Result 5   * Laboratory test name local code = ALB * Laboratory test name local description = Albumin * Laboratory Test Result Type = 1 * Laboratory test numeric result = 47 * Laboratory test reportable result = 47 * Laboratory test usable result = 47 * Laboratory test result unit = g/L * Laboratory test reference range = 35-52   Lab Test Result 6   * Laboratory test name local code = CA199 * Laboratory test name local description = CA 19.9 (Pancreas) * Laboratory Test Result Type = 1 * Laboratory test numeric result = 15.1 * Laboratory test reportable result = 15.1 * Laboratory test usable result = 15.1 * Laboratory test result unit = kU/L * Laboratory test reference range = ≤37.0 * (Added) Laboratory test result note = Note: CA 19.9 test is cancelled due to insufficient specimen quantity.   **Laboratory report data**   * Laboratory report (PDF) = [Generated PDF report with the above data and file name] * File indicator = 1 * File name = [PDF file name upload by HCP] * (Updated) Laboratory report date = 25-Aug-2024 17:10   == Actual data values (Refer to “Appendix - Actual Data Values (Sample)” for details)  Expected result:   1. Data Upload without any problems 2. Lab record can pass Level 2 data validation as laboratory test result note is given for lab test CA 19.9 in the updated record. 3. The Laboratory structure data will be shown in the Laboratory Record Module of eHR Viewer (EVE) :    1. At Laboratory Cumulative Result(s):       * All structured test results 1 – 6 will be shown with their local test names (Level 2 data)       * Alk. Phosphatase result is shown as normal (value in black and without abnormal result indicator ↑) after the amendment.    2. At Laboratory Details:       * All lab test results 1 – 6 will be shown with their local test name (Level 2 data)  * The updated PDF file with all test results 1- 6 will be shown in the eHR Viewer (EVE). |
| 4c | **Case scenario**: Delete test case 3(c) which has been uploaded for <HCR3>  == Actual data values (Refer to “Appendix - Actual Data Values (Sample)” for details)  **Expected result:**   1. The previous uploaded record will not be found in the eHR Viewer (EVE). 2. Batch 2 Data file will contain 1 Delete transaction for record 3(c). (Test results should be compared with provided results <*DF and DF\_INS message files>* as attached be Appendix 3 Sample Messages) |
| 4d | **Case scenario**:  LFT structured data and report image together with CA 242 send-out test report image has been uploaded as a single record in test case 3(d) for <HCR4>.  Remove the CA 242 report image from test case 3(d) and re-upload the record under the same eHR record key. Upload the CA 242 report image as a separate lab record (separated eHR record key).  == Actual data values (Refer to “Appendix - Actual Data Values (Sample)” for details)  Expected data contents for Level 2 record:   1. **Lab Record 1 – LFT structured test results and report image (in-house test)**   **Laboratory test request data**   * Laboratory test order number = 99087819043:OR10999546 * Laboratory test request healthcare institution identifier = [source system provided] * Laboratory test request healthcare institution long name = [source system provided] * Laboratory test request healthcare institution local name = Dr CHAN Medical Centre * (Updated) Panel local code = LFT * (Updated) Panel local description = Liver Function Tests   **Laboratory result general information data**   * Laboratory test request performing laboratory name = ABC Laboratory * Laboratory test request number = 24CP9992341 * Laboratory category code = GEOT * Laboratory category description = General & Other * Laboratory category local description = General Laboratory * Laboratory report status code = F * Laboratory report status description = Final report * Laboratory report status local description = Original report * Laboratory report reference datetime = 03-Oct-2024 10:20:00 * Laboratory report comment = CA 242 has been sent to XYZ Laboratory for further investigation. Please refer to the results in the XYZ Laboratory report.   **Specimen data**   * Specimen collection datetime = 03-Oct-2024 10:20:00 * Specimen arrival datetime = 03-Oct-2024 12:30:00 * Specimen type local description = Blood   **General Laboratory test result data (Lab Test Result 1 - 5)**  Lab Test Result 1   * Laboratory test name local code = TBIL * Laboratory test name local description = Total Bilirubin * Laboratory Test Result Type = 1 * Laboratory test numeric result = 19 * Laboratory test reportable result = 19 * Laboratory test usable result = 19 * Laboratory test result unit = umol/L * Laboratory test reference range = ≤18 * Abnormal result indicator code = H * Abnormal result indicator description = High * Abnormal result indicator local description = High   Lab Test Result 2   * Laboratory test name local code = ALT * Laboratory test name local description = ALT (GPT) * Laboratory Test Result Type = 1 * Laboratory test numeric result = 100 * Laboratory test reportable result = 100 * Laboratory test usable result = 100 * Laboratory test result unit = U/L * Laboratory test reference range = ≤86 * Abnormal result indicator code = H * Abnormal result indicator description = High * Abnormal result indicator local description = High * Laboratory test result note = Note: New pediatric reference intervals for ALT (GPT) applied as of 07 Mar 2017   Lab Test Result 3   * Laboratory test name local code = ALKPHOS * Laboratory test name local description = Alk. Phosphatase * Laboratory Test Result Type = 1 * Laboratory test numeric result = 110 * Laboratory test reportable result = 110 * Laboratory test usable result = 110 * Laboratory test result unit = U/L * Laboratory test reference range = 43-105 * Abnormal result indicator code = H * Abnormal result indicator description = High * Abnormal result indicator local description = High   Lab Test Result 4   * Laboratory test name local code = TP * Laboratory test name local description = Total Protein * Laboratory Test Result Type = 1 * Laboratory test numeric result = 50 * Laboratory test reportable result = 50 * Laboratory test usable result = 50 * Laboratory test result unit = g/L * Laboratory test reference range = 66-80 * Abnormal result indicator code = L * Abnormal result indicator description = Low * Abnormal result indicator local description = Low * Laboratory test result note = Note: Total protein concentration is 4 - 8 g/L lower from patient in the recumbent rather than ambulatory status   Lab Test Result 5   * Laboratory test name local code = ALB * Laboratory test name local description = Albumin * Laboratory Test Result Type = 1 * Laboratory test numeric result = 31 * Laboratory test reportable result = 31 * Laboratory test usable result = 31 * Laboratory test result unit = g/L * Laboratory test reference range = 35-52 * Abnormal result indicator code = L * Abnormal result indicator description = Low * Abnormal result indicator local description = Low   **Laboratory report data**  Lab Report 1   * Laboratory report (PDF) = [Generated PDF report with the above data and file name] * File indicator = 1 * File name = [PDF file name upload by HCP] * Laboratory report date = 3-Oct-2024 17:00   (Removed Lab Report 2)   1. **Lab Record 2 – CA 242 report image (Send-out test)**   **Laboratory test request data**   * Laboratory test order number = 99087819043:OR10999546 * Laboratory test request healthcare institution identifier = [source system provided] * Laboratory test request healthcare institution long name = [source system provided] * (Updated) Laboratory test request healthcare institution local name = ABC Laboratory * (Updated) Panel local code = CA242 * (Updated) Panel local description = CA 242   **Laboratory result general information data**   * (Updated) Laboratory test request performing laboratory name = XYZ Laboratory * (Updated) Laboratory test request number = 24XYZ0010362 * Laboratory category code = GEOT * Laboratory category description = General & Other * Laboratory category local description = General Laboratory * Laboratory report status code = F * Laboratory report status description = Final report * Laboratory report status local description = Original report * Laboratory report reference datetime = 03-Oct-2024 10:20:00 * (Remove Laboratory report comment)   **Laboratory report data**  Lab Report 2   * Laboratory report (PDF) = [Generated PDF report with the above data and file name] * File indicator = 1 * File name = [PDF file name upload by HCP] * Laboratory report date = 6-Oct-2024 09:10   == Actual data values (Refer to “Appendix - Actual Data Values (Sample)” for details)  Expected result:   1. Data Upload without any problems 2. If both records are declared as Level 2 records during the upload, only the LFT record with both structured test results and report image will pass the Level 2 data validation. CA 242 record which has report image without structured test results will be regraded to Level 1, unless the record is declared as Level 1 records during the upload. 3. Both records will be shown in the Laboratory Record Module of eHR Viewer (EVE) :   Lab Record 1 – LFT structured test results and report image (in-house test)   * 1. At Laboratory Cumulative Result(s):      + The test results 1 – 5 will be shown with their local test names (Level 2 data)      + All LFT tests are out-ranged and will be highlighted in red with abnormal result indicators ↑ or ↓   2. At Laboratory Details:      + Test Result 1 – 5 will be shown with their local test name (Level 2 data)   Lab Record 2 – CA 242 report image (Send-out test)   1. At Laboratory Cumulative Result(s):    * + No Structured test result shown 2. At Laboratory Details:    * + No Structured test result shown 3. The report images for LFT and CA 242 will be displayed as two separated PDF files in the eHR Viewer (EVE).PDF |
|  | **Expected eMR System Behavior** | 1. HCP’s eMR system will upload **Batch 2** data file with all LABGEN records of created in **4a-4d (Level 2 data)** by INC mode. 2. **Batch 2** data files should include below files: <[sample](#_Appendix_–_Sample)> 3. Participant List (PL) 4. Data Files (DFs) 5. HL7 message with signature 6. Zip File (embedded PL, DFs and HL7 message files) 7. Zip Control File (contains the filenames of PL, DFs and HL7 message) 8. eMR system uploads **Batch 2** data files (‘Zip File’ and ‘Zip Control File') to eHealth. 9. HCP verifies the data upload status by reviewing the 'Process Summary Report' and 'Exception Report' in eHR Inbox. 10. HCP verifies the completeness and correctness of data uploaded in eHR Viewer. | |
|  | **Results Verification** | * HCP verifies if the uploaded records can be properly viewed in eHR Viewer (EVE) and reviews if the data batches uploaded can be processed successfully or rejected through ‘Process Summary’, ‘Exception Report’ and ‘Re-grade Report’ in eHR Inbox. | |
| **Actual Result**  **(Screenshot / Attachment)** | **Data Files Uploaded:**  *<Attached the Zip file and Control file; password to unzip the file>* | |
| **Attachment/Screenshot:**  *<Attached the screen shots of records uploaded in eHR Viewers>* | |
| **Remark** | *<State your reasons/ justification for exemption with case number>* | |
| **Testing Date** | *<Provided by HCP>* | |
| **Verified By** | *<Provided by HCP>* | |

| **5** | **Test Case ID** | LABGEN-LV1-001 [FOR LEVEL 1 DATA UPLOAD ONLY] |
| --- | --- | --- |
|  | **Function Description** | HCP received sharing consents from testing HCRs, then perform the first data upload of HCRs’ laboratory records to eHealth by DM Mode for Level 1 data. |
| **Subsequent case of** | N/A |
| **Testing Assumption** | * HCR1-HCR3 have already given sharing consents to the HCP. * The eMR system contains laboratory records of these HCRs and will upload all the laboratory (general) records of <HCR1> - <HCR3> to eHealth in Batch 1 data files created by DM mode. |
| **Test Actions** | HCP creates below LABGEN records in the local lab information system (LIS): |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | 5a | **Case scenario**: Register the lab test request of renal function tests (RFT) with eGFR in LIS for <HCR1>. Upload the lab image when all results are ready, details as follows:  Expected data contents for Level 1 lab record:  **Laboratory test request data**   * Laboratory test order number = 99087819043:OR12345678 * Laboratory test request healthcare institution identifier = [source system provided] * Laboratory test request healthcare institution long name = [source system provided] * Laboratory test request healthcare institution local name = Dr CHAN Medical Centre * Panel local code = RFT\_eGFR * Panel local description = Renal Function Tests & eGFR   **Laboratory result general information data**   * Laboratory test request performing laboratory name = ABC Laboratory * Laboratory test request number = 24GX0011 * Laboratory category code = GEOT * Laboratory category description = General & Other * Laboratory category local description = General Laboratory * Laboratory report status code = F * Laboratory report status description = Final report * Laboratory report status local description = Original report * Laboratory report reference datetime = 10-Jul-2024 14:33:00   **Laboratory report data**   * Laboratory report (PDF) = [Generated PDF report with the above data and file name] * File indicator = 1 * File name = [PDF file name upload by HCP] * Laboratory report date = 15-Jul-2024 19:03   == Actual data values (Refer to “Appendix - Actual Data Values (Sample)” for details)  Expected result:   1. Data Upload without problem 2. Lab record will pass Level 1 data validation 3. The Laboratory record will be shown in the Laboratory Record Module of eHR Viewer (EVE): 4. Record with profile description “Renal Function Tests & eGFR” is found in Date View and Document View 5. No structured test results under “Laboratory Cumulative Results” 6. The report content from report image should be matched with the shared structured data, such as laboratory report reference date time |
| 5b | **Case scenario**: Register the lab test request of renal function tests (RFT) with eGFR in LIS for <HCR1>. Upload the lab image when the results are ready, details as follows:  Expected data contents for Level 1 lab record:  **Laboratory test request data**   * Laboratory test order number = 99087819043:OR12345678 * Laboratory test request healthcare institution identifier = [source system provided] * Laboratory test request healthcare institution long name = [source system provided] * Laboratory test request healthcare institution local name = Dr CHAN Medical Centre * Panel local code = RFT\_eGFR * Panel local description = Renal Function Tests & eGFR   **Laboratory result general information data**   * Laboratory test request performing laboratory name = ABC Laboratory * Laboratory test request number = 24GX0011 * Laboratory category code = GEOT * Laboratory category description = General & Other * Laboratory category local description = General Laboratory * Laboratory report status code = F * Laboratory report status description = Final report * Laboratory report status local description = Original report * Laboratory report reference datetime = 10-Jul-2024 14:33:00   **Laboratory report data**   * Laboratory report (PDF) = [Generated PDF report with the above data and file name] * File indicator = 1 * File name = [PDF file name upload by HCP] * Laboratory report date = 15-Jul-2024 19:03   == Actual data values (Refer to “Appendix - Actual Data Values (Sample)” for details)  Expected result:   1. Data Upload without any problems 2. Lab record can pass Level 1 data validation 3. The Laboratory record will be shown in the Laboratory Record Module of eHR Viewer (EVE): 4. Record with profile description “Renal Function Tests & eGFR” is found in Date View and Document View 5. No structured test results under “Laboratory Cumulative Results 6. The report content from report image should be matched with the shared structured data, such as laboratory report reference date time |
| 5c | **Case scenario**: Register lab test request of liver function tests (LFT) and CA 242 for <HCR4>. LFT are performed by HCP and test results are reported in LIS. The CA 242 test has been sent out to another lab for testing. When the send-out test CA 242 is available, the referred lab will return the report image in PDF format a few days later  Upload the report images of LFT and CA 242 report image as a single record when all results are ready, details as follows:  Expected data contents for Level 1 lab record:  **Laboratory test request data**   * Laboratory test order number = 99087819043:OR10999546 * Laboratory test request healthcare institution identifier = [source system provided] * Laboratory test request healthcare institution long name = [source system provided] * Laboratory test request healthcare institution local name = Dr CHAN Medical Centre * Panel local code = LFT\_CA242 * Panel local description = Liver Function Tests & CA 242   **Laboratory result general information data**   * Laboratory test request performing laboratory name = ABC Laboratory * Laboratory test request number = 24CP9992341 * Laboratory category code = GEOT * Laboratory category description = General & Other * Laboratory category local description = General Laboratory * Laboratory report status code = F * Laboratory report status description = Final report * Laboratory report status local description = Original report * Laboratory report reference datetime = 03-Oct-2024 10:20:00   **Laboratory report data**  Lab Report 1   * Laboratory report (PDF) = [Generated PDF report with the above data and file name] * File indicator = 1 * File name = [PDF file name upload by HCP] * Laboratory report date = 3-Oct-2024 17:00   Lab Report 2   * Laboratory report (PDF) = [Generated PDF report with the above data and file name] * File indicator = 1 * File name = [PDF file name upload by HCP] * Laboratory report date = 6-Oct-2024 09:10   == Actual data values (Refer to “Appendix - Actual Data Values (Sample)” for details)  Expected result:   1. Data Upload without any problems 2. Lab record can pass Level 1 data validation 3. The Laboratory structure data will be shown in the Laboratory Record Module of eHR Viewer (EVE) :    * + Record with profile description “Liver Function Tests & CA 242” is found in Date View and Document View      + The 2 report images are combined as a PDF file      + No structured test results under “Laboratory Cumulative Results      + The report content from report image should be matched with the shared structured data, such as laboratory report reference date time |
|  | **Expected eMR System Behavior** | * HCP verifies the interface file contents and check if the uploaded records can be properly viewed in eHR Viewer (EVE). HCP must also review if the data batches uploaded can be processed successfully from Process Summary, Data Exception Report or Data Regrade Report from eHR Inbox | |
|  | **Results Verification** | **Data Files Uploaded:**  *<Attached the Zip file and Control file; password to unzip the file>* | |
| **Actual Result**  **(Screenshot / Attachment)** | **Attachment/Screenshot:**  *<Attached the screen shots of records uploaded in eHR Viewers>* | |
| **Remark** | *<State your reasons/ justification for exemption with case number>* | |
| **Testing Date** | *<Provided by HCP>* | |
| **Verified By** | *<Provided by HCP>* | |

| **6** | **Test Case ID** | LABGEN-LV1-002 [FOR LEVEL 1 DATA UPLOAD ONLY] | |
| --- | --- | --- | --- |
|  | **Function Description** | There are subsequent changes in HCRs’ clinical records in Batch 1 data upload. HCP uploads incremental changes to eHealth by INC Mode for Level 1 data. | |
| **Subsequent cases of** | LABGEN-LV1-001 | |
| **Testing Assumption** | HCP has already verified that Batch 1 data have been processed successfully with correct test results. | |
| **Test Actions** | HCP updates lab records from Batch 1 in LIS as follows: | |
| 6a | **Case scenario:** Hepatitis serology tests are added to the lab record for <HCR1> (Test case 3a) after uploading to eHealth. Upload the lab record when the newly added test results are ready, details as follows:  Expected data contents for Level 1 lab record:  **Laboratory test request data**   * Laboratory test order number = 99087819043:OR12345678 * Laboratory test request healthcare institution identifier = [source system provided] * Laboratory test request healthcare institution long name = [source system provided] * Laboratory test request healthcare institution local name = Dr CHAN Medical Centre * (Updated) Panel local code = RFT\_eGFR\_HBVSero * (Updated) Panel local description = Renal Function Tests & eGFR, Hepatitis Serology Tests   **Laboratory result general information data**   * Laboratory test request performing laboratory name = ABC Laboratory * Laboratory test request number = 24GX0011 * Laboratory category code = GEOT * Laboratory category description = General & Other * Laboratory category local description = General Laboratory * Laboratory report status code = F * Laboratory report status description = Final report * Laboratory report status local description = Original report * Laboratory report reference datetime = 10-Jul-2024 14:33:00   == Actual data values (Refer to “Appendix - Actual Data Values (Sample)” for details)  Expected result:   1. Data Upload without any problem 2. Lab record can pass Level 2 data validation 3. The Laboratory structure data will be shown in the Laboratory Record Module of eHR Viewer (EVE): 4. Record with profile description “Renal Function Tests & eGFR, Hepatitis Serology Tests” is found in Date View and Document View 5. No structured test results under “Laboratory Cumulative Results 6. The report content from report image should be matched with the shared structured data, such as laboratory report reference date time 7. The report image should be the latest version, containing all previously reported RFT contents along with the newly added serology test results. |
| 6b | **Case scenario**: Delete test case 5(b) which has been uploaded for <HCR2>  == Actual data values (Refer to “Appendix - Actual Data Values (Sample)” for details)  **Expected result:**   1. The previous uploaded record will not be found in the eHR Viewer (EVE). 2. Batch 2 Data file will contain 1 Delete transaction for record 5(b). (Test results should be compared with provided results <*DF and DF\_INS message files>* as attached be Appendix 3 Sample Messages) |
| 6c | **Case scenario**:  Both LFT report image and CA 242 send-out test report image has been uploaded as a single record in test case 5(c) for <HCR3>.  Upload the CA 242 report image as an individual lab record (separated eHR record key).  For the previously uploaded test case 5(c), amend one of the LFT results (for example, from normal value to out-ranged value) and remove the CA 242 report image. Then update the revised record to eHealth (Re-upload the record under the same eHR record key)  Expected data contents for Level 1 record:   * **Lab Record 1 – LFT structured test results and report image (in-house test)**   **Laboratory test request data**   * Laboratory test order number = 99087819043:OR10999546 * Laboratory test request healthcare institution identifier = [source system provided] * Laboratory test request healthcare institution long name = [source system provided] * Laboratory test request healthcare institution local name = Dr CHAN Medical Centre * (Updated) Panel local code = LFT * (Updated) Panel local description = Liver Function Tests   **Laboratory result general information data**   * Laboratory test request performing laboratory name = ABC Laboratory * Laboratory test request number = 24CP9992341 * Laboratory category code = GEOT * Laboratory category description = General & Other * Laboratory category local description = General Laboratory * Laboratory report status code = F * Laboratory report status description = Final report * Laboratory report status local description = Original report * Laboratory report reference datetime = 03-Oct-2024 10:20:00   **Laboratory report data**  Lab Report 1   * Laboratory report (PDF) = [Generated PDF report with the above data and file name] * File indicator = 1 * File name = [PDF file name upload by HCP] * Laboratory report date = 3-Oct-2024 17:00   (Removed Lab Report 2)   * **(Added) Lab Record 2 – CA 242 report image (Send-out test)**   **Laboratory test request data**   * Laboratory test order number = 99087819043:OR10999546 * Laboratory test request healthcare institution identifier = [source system provided] * Laboratory test request healthcare institution long name = [source system provided] * (Updated) Laboratory test request healthcare institution local name = ABC Laboratory * (Updated) Panel local code = CA242 * (Updated) Panel local description = CA 242   **Laboratory result general information data**   * (Updated) Laboratory test request performing laboratory name = XYZ Laboratory * (Updated) Laboratory test request number = 24XYZ0010362 * Laboratory category code = GEOT * Laboratory category description = General & Other * Laboratory category local description = General Laboratory * Laboratory report status code = F * Laboratory report status description = Final report * Laboratory report status local description = Original report * Laboratory report reference datetime = 03-Oct-2024 10:20:00   **Laboratory report data**  Lab Report 2   * Laboratory report (PDF) = [Generated PDF report with the above data and file name] * File indicator = 1 * File name = [PDF file name upload by HCP] * Laboratory report date = 6-Oct-2024 09:10   == Actual data values (Refer to “Appendix - Actual Data Values (Sample)” for details)  Expected result:   1. Data Upload without any problems 2. Lab record can pass Level 1 data validation 3. 2 Laboratory records will be shown in the Laboratory Record Module of eHR Viewer (EVE):  * 1 record with profile description “Liver Function Tests” and another record with profile description “CA 242” are found in Date View and Document View * Both records have no structured test results under “Laboratory Cumulative Results” * The report content from report image should be matched with the shared structured data, such as laboratory report reference date time * The LFT report image should be the latest version, containing all LFT contents along with the amended test result. |
|  | **Expected eMR System Behavior** | 1. HCP’s eMR system will upload **Batch 2** data file with all LABGEN records of created in **6a-6c (Level 1 data)** by INC mode. 2. **Batch 2** data files should include below files: <[sample](#_Appendix_–_Sample)> 3. Participant List (PL) 4. Data Files (DFs) 5. HL7 message with signature 6. Zip File (embedded PL, DFs and HL7 message files) 7. Zip Control File (contains the filenames of PL, DFs and HL7 message) 8. eMR system uploads **Batch 2** data files (‘Zip File’ and ‘Zip Control File') to eHealth. 9. HCP verifies the data upload status by reviewing the 'Process Summary Report' and 'Exception Report' in eHR Inbox. 10. HCP verifies the completeness and correctness of data uploaded in eHR Viewer. | |
|  | **Results Verification** | * HCP verifies if the uploaded records can be properly viewed in eHR Viewer (EVE) and reviews if the data batches uploaded can be processed successfully or rejected through ‘Process Summary’, ‘Exception Report’ and ‘Re-grade Report’ in eHR Inbox. | |
| **Actual Result**  **(Screenshot / Attachment)** | **Data Files Uploaded:**  *<Attached the Zip file and Control file; password to unzip the file>* | |
| **Attachment/Screenshot:**  *<Attached the screen shots of records uploaded in eHR Viewers>* | |
| **Remark** | *<State your reasons/ justification for exemption with case number>* | |
| **Testing Date** | *<Provided by HCP>* | |
| **Verified By** | *<Provided by HCP>* | |

# Appendix – Sample Messages

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Case ID** | **Step No.** | **File Type** | **Bulk Load Format** | **SOAP Format**  **(by LAAM)** |
| **Level 3** |
| LABGEN-LV3-001 | [DM]  1a – 1d | Participant List (PL) |  | Level 3: |
| Data File (REQ) |  |
| Data File (RST) |  |
| Data File (RPT) |  |
| HL7 Message |  |
| Zip File | *(Password: Abcd1234)* |
| Control File |  |
| LABGEN-LV3-002 | [INC]  2a – 2d | Participant List (PL) |  | Level 3: |
| Data File (REQ) |  |
| Data File (RST) |  |
| Data File (RPT) |  |
| HL7 Message |  |
| Zip File | *(Password: Abcd1234)* |
| Control File |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Case ID** | **Step No.** | **File Type** | **Bulk Load Format**  **Level 2** | **SOAP Format**  **(by LAAM)** |
| LABGEN-LV2-001 | [DM]  3a – 3d | Participant List (PL) |  | Level 2: |
| Data File (REQ) |  |
| Data File (RST) |  |
| Data File (RPT) |  |
| HL7 Message |  |
| Zip File | *(Password: Abcd1234)* |
| Control File |  |
| LABGEN-LV2-002 | [INC]  4a – 4d | Participant List (PL) |  | Level 2: |
| Data File (REQ) |  |
| Data File (RST) |  |
| Data File (RPT) |  |
| HL7 Message |  |
| Zip File | *(Password: Abcd1234)* |
| Control File |  |

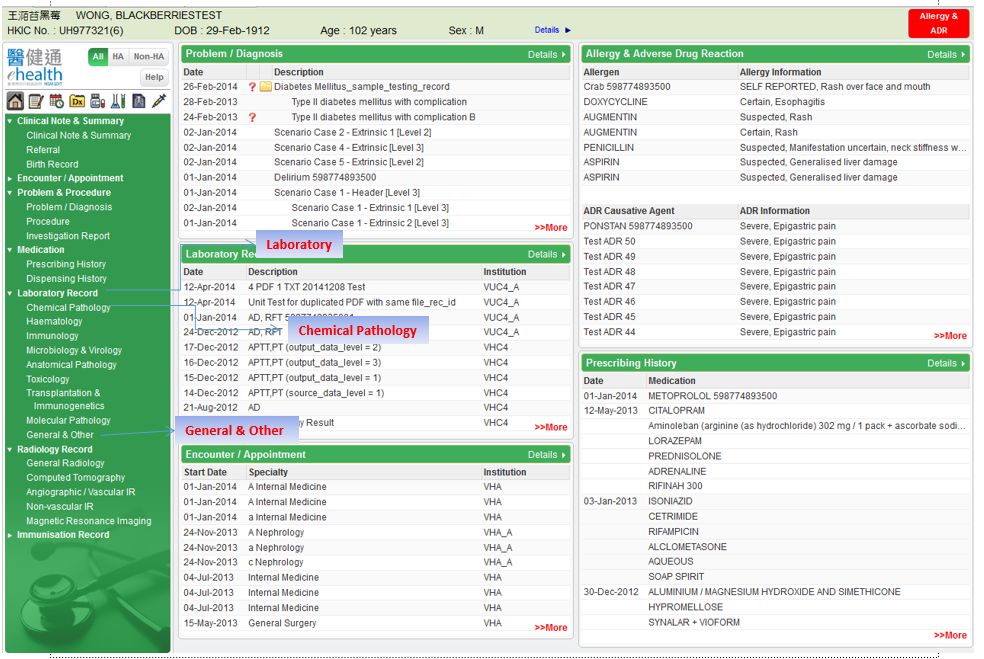
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Case ID** | **Step No.** | **File Type** | **Bulk Load Format**  **Level 1** | **SOAP Format**  **(by LAAM)** |
| LABGEN-LV1-001 | [DM]  5a – 5c | Participant List (PL) |  | Level 1: |
| Data File (REQ) |  |
| Data File (RST) |  |
| Data File (RPT) |  |
| HL7 Message |  |
| Zip File | *(Password: Abcd1234)* |
| Control File |  |
| LABGEN-LV1-002 | [INC]  6a – 6c | Participant List (PL) |  | Level 1: |
| Data File (REQ) |  |
| Data File (RST) |  |
| Data File (RPT) |  |
| HL7 Message |  |
| Zip File | *(Password: Abcd1234)* |
| Control File |  |

# Appendix – Testing HCP and HCRs Information

|  |  |
| --- | --- |
| **Sample Message** |  |
| **Self-Service Testing** | *<Attach the testing HCRs excel file used>* |
| **Final Testing** | *<Attach the testing HCRs excel file used>* |

* + eHR DCT Support will provide other sets of testing HCRs for HCP to perform Self-Service testing and Final testing respectively.

# Appendix – Sample Results in eHR Viewer (EVE)



# Appendix – Actual Data Values (Sample)

If the actual values entered are various from the test case, please provide actual values as below.  
If the value is not inputted, please use [BLANK] to indicate that empty value is inputted intentionally.

