

CLCH Interoperability Project
Child Health Data Automation Phase 2
Immunisation upload tool for SystemOne
Test Plan

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Distribution List

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Introduction and Purpose of Document

This document defines guidelines for the test approach to be followed in order to achieve the test objectives and execution of test types whereby CLCH will be able to accept the development of the automatic data upload routine to SystemOne for Immunisation data received from GP practices in Barnet

Objectives

1. The solution must process the incoming data in accordance with the business rules defined in the requirement document ref: []
2. No data will be corrupted nor lost at any stage in the process
3. All incoming data that passes validation will be transformed in accordance with the mapping rules ref: []
4. The fail-save and contingency processes ensure the timely processing of the data with no loss

Scope of the solution

The purpose of this project is to implement a means of automatically uploading to SystemOne a standardized immunisation dataset from GP Practices using Emis Web in Barnet.

Exclusions

The means of extracting and mapping the immunisation dataset from GP practices is excluded from this test plan.

It is assumed that the extracted files will be formatted and coded in accordance with the requirement of the Vaccination Upload tool as defined by TPP and will have been fully tested and assured by NHS London who hold the contract.

Outline of the Business Process

The extract file will be transferred securely to the trust on the same day as extraction.

Once successfully transferred, the file will be written to a Trust specific 'Inbound' folder on a nominated secure server where it will await processing by the SystemOne Vaccination Upload tool developed by TPP.

On selection by the user the data in the incoming file will be transferred by the Vaccination Upload Tool into the prescribed fields in SystemOne in each respective client record such that they are visible to the front end user in the appropriate functions and screens and can be reported accurately for COVER (Cover of Immunisations Evaluated Rapidly).

The Vaccination Upload Tool will check that the data is formatted correctly and validate against a CLCH specific mapping table held within the SystemOne database. The tool will also check the data against the data already recorded on SystemOne for each client in the extract file before applying the changes to the database. If the client is not found or the data is not correctly formatted or coded or

is already recorded in the client record, an error log will be produced and the data will not be committed to SystmOne. Once the validation of the record is completed the Vaccination Upload Tool will commit the data to the client's record in SystmOne.

Scope and Overview:

The testing of the application and its functions in the form of Unit, Integration, System and Factory Acceptance testing and will be the responsibility of TPP. Until the tool has passed these test stages it will not be released to CLCH for User Acceptance Testing (UAT).

CLCH will be responsible for User Acceptance Testing (UAT)

User Acceptance Testing (UAT) is designed to provide confidence not just in the build but in the whole business process itself. The tests will follow tailored test scripts. The test scripts will reflect the use cases or situations that will be encountered in the live environment. The scripts will be detailed enough for the user not to require prior training or knowledge of the Vaccination Upload Tool.

Test data will be supplied and the tests will take place in a non-live environment so as not to run the risk of incorrect data being imported into a child's record.

The results obtained will be compared with the expected results. If there is a correct match for every case, the test suite will be deemed to have passed. If not, TPP will be required to investigate and correct accordingly.

Test Approach:

All tests will be repeated at least twice and under taken by a tester and an observer in accordance with best practice.

Testing is scheduled to take XX days commencing on XX using the test scripts as in []. The schedule below outlines who is required for each day of testing.

<u>Date</u>	<u>People Required</u>	<u>Time</u>	<u>Location</u>
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Testing Prerequisites

The following prerequisites have been identified as key to ensure the proposed UAT plan can be completed:

- Delivery of Test Environment which has passed Unit and Application Testing
- Test clients registered and configured correctly on SystmOne environment to fit the requirements of the test scripts
- CLCH agreed immunisation mapping table is installed in SystmOne environment
- Availability of the Vaccination Upload tool for SystmOne which has passed FAT testing
- Availability of Test Scripts
- Availability of testing personnel as defined above
- Adequate Access to SystmOne test environment and a PC loaded with the exe for the tool

Test Scripts

The test scripts will cover the following use cases:

- Practice code missing
- NHS number missing from incoming record
- Surname missing
- First name missing
- Gender missing
- Date of birth missing
- READ code not valid
- Date of administration missing
- Child not registered on S1
- Child registered manually and failed record uploaded again
- NHS number matches but surname does not match
- NHS number matches but first name does not match
- NHS number matches but date of birth does not match
- Invalid NHS number
- Immunisation already recorded in client record
- Subsequent part number of immunisation already recorded in client record
- User confirms record in XX should be uploaded
- User amends the immunisation part number in record XX and uploads again
- User amends the immunisation in record XX and uploads again
- Immunisation not recognised
- Immunisation mapped and failed record uploaded again
- User amends rejected record and uploads again
- GP practice registered on SystmOne does not match that of input record
- Cover report

The test data files created will contain at least four records that fit each use case scenario. The data will be obtained from a willing GP practice but will not have real patient details. The patient details will match those loaded in the test environment except where the use case calls for it to be different

The steps the tester has to follow will be set out so that he/she does not have to have any knowledge of SystmOne or of the upload tool.

The CLCH agreed immunisation mapping table will be validated during the UAT by the test scripts.

The expected outcome will be set out for each script and the actual outcome recorded.

The test scripts are available in []

Test data

A practice in Barnet will be approached to give permission for one of their monthly immunisation extract files to be utilised after all patient identifiable data has been removed and replaced with data for test clients.

It is recommended that the file be representative of the average size that will be processed at a one time.

Test Success Criteria

The results obtained in each script will be compared with the expected results.

100% pass of all test scripts will be required

Test Results

The result categories for a test are as follows:

- Pass
- Conditional Pass
- Fail

The above categories will act as a filter for the Interoperability team to review. Any scripts with a Pass category need no further investigation. Those in the conditional pass category may require clarification which when received will move the test into a Pass or less likely a Fail category.

The Fail category will result in it being referred to TPP.

All scripts produced and their result categories will be listed in the test tracker document ref: [] along with the date and user who carried out the test. Resolution of a failed or conditionally passed test will also be recorded.

Should a test result require a change in the build or solution then the change control process will be invoked.

Testing Sign Off

The Test manager will observe the testing and review the results and regression testing of fixes.

The criteria for sign off will be that the solution:

1. is fit for purpose,
2. meets the CLH Requirements Specification and the TPP Functional Design document,
3. does not introduce any risk whether business or clinical
4. enables accurate reporting of the COVER figures.

Regression Testing

When an error is identified the change process will be invoked and regression testing will take place once the change has been made.

Regression testing will consist of Unit testing of the component changed and Integration testing with any parts of the system with which the changed component interacts followed by a rerun of the failed test scripts.

Installation

After installation of the fully tested build on the SystemOne Live Environment a further test will be performed by Carol Stamper utilising a live patient dataset provided by a GP practice 2 days prior to Go Live. This will include generation of a sample COVER report.

Change control:

All requests for change resulting from the UAT will be documented and submitted to TPP for consideration and possible approval

Risk Analysis:

ID	Risk/issue	Likelihood	Impact	Mitigation
R1	Unavailability of test environment	L	H	Environment fully tested day before Resilience plan
R2	Unavailability of tester	L	L	Details of scripts such that anyone can undertake testing
R3	Late delivery of tool	M	H	Dates put back 7 days as a contingency to accommodate slippage Close liaison with TPP
R4	Time delay to rectify issue with TPP tool	M	M	TPP to fully test before delivery Negotiation with TPP as to time for delivery of amendments

Review and Approvals:

The following will be asked to review the test plan and the outcome of the testing with a view to approval:

1. Test Manager
2. SystemOne Project Board
3. Clinical Governance Lead
4. Information governance team along with the detailed description of the architecture and security infrastructure
5. CHIH CBU Manager

Appendices/ References

Glossary