

HI CCA Testing FAQs

- **When should we contact IV&V?**

Email IV&V as soon as you decide to integrate your application with My Health Record. Do this well in advance of being ready for testing, so they can include you in their test planning.

- **I am almost ready for HI CCA testing – what do I do now?**

You start the process by completing an Implementation Conformance Statement (ICS) and emailing it to IV&V. On this form, you will identify which business use cases and associated requirements you have implemented. You also identify which HI Service web services your implementation uses.

You can download this form from the ADHA website at <https://myhealthrecorddeveloper.digitalhealth.gov.au/resources/prepare/healthcare-identifiers-pre-requisites#step-5>.

IV&V will use your completed ICS to prepare a time and cost estimate for the work, and this will form the basis for the testing. The ICS will be included as an attachment to the final test report.

- **What does HI CCA testing cover?**

The focus for HI CCA testing is the business use cases implemented in your application and conformance to the use case requirements. This testing expands upon the NOC test, which focuses on the web services.

If you want to use a web service, you must have CCA approval for an associated use case, which shows that you are using the web service in an approved manner. Passing NOC for a web service is not, on its own, sufficient to get approval for your software to access that web service.

- **How long does the testing take?**

How long the testing will take will depend on the set of use cases you have implemented. Typical effort ranges from 5 to 7 days (40 to 56 hours), and comprises three components:

- Initial planning/preparation. This includes analysis of the use cases selected in your ICS and setting up the test specification – usually 1.5 day (12 hours)
- Test execution. A walkthrough of the relevant parts of your application and an informal dry run of key test cases to uncover any issues, followed by the formal test run of all claimed requirements – 2-4 days (16 – 32 hours) depending on how many use cases you have implemented and whether there are any false starts and retesting is required
- Test result analysis and report writing, report review process. The output of this is a NATA-endorsed HI Conformance Test Summary Report – 1.5 day (12 hours).

- **How is the testing performed – do we run the tests or do IV&V run them?**

IV&V execute the tests. The actual logistics of this varies depending on the system architecture. In some cases (especially if the application is deployed in the cloud), the tester will connect directly to your application and run most of the tests on his own. In other cases he will log in remotely to a machine at your premises and do the tests; or you will share a screen and he will do the tests that way.

Remote testing can be done using GoToMeeting, Remote Desktop, Team Viewer or other similar methods. IV&V will discuss this with you at the start of testing to determine which is best for you.

- **My application does not meet all of the Mandatory requirements in a business use case I have selected. Is this a problem for the testing?**

Yes. You will need to comply with all Mandatory requirements in the use cases you are implementing, and all Mandatory requirements will be tested.

You will also need to comply with all Conditional requirements that apply to your circumstances. For example if your system supports provisional IHIs, you must comply with all Conditional requirements related to handling provisional IHIs. If your system does not support provisional IHIs, you must comply with all Conditional requirements related to not handling provisional IHIs. There are a few either/or situations like this amongst the Conditional requirements.

You do not need to implement or comply with any Recommended requirements, but you may choose to do so.

You do not need to implement or comply with any requirements that are not associated with use cases for which you are not claiming conformance.

- **How much support do the testers need from us?**

IV&V will need a block of time from you at the start of testing, with intermittent support needed during testing as required.

- IV&V will need someone knowledgeable to buddy up with them for approximately .5 day at the start of the test execution phase so that they can do the ICS walkthrough, confirm the test environment, rapidly go up the learning curve for the application, and to answer any difficult questions around how to simulate certain scenarios with the software.
- Tests that involve inspection or manipulation of the database usually require vendor assistance. In these cases, the tester will normally conference call and ask you to make certain changes to the database using whatever tools you normally use. It helps if the tester can see what you are doing, but not always mandatory – often they can confirm the database manipulation by looking at the effects at the UI. There have been some cases, particularly where the DB schema is simple, where it's easier for the tester to just do the database manipulation himself.
- IV&V will also need to see audit and error logs, and ideally SOAP messages, and commonly these require additional access rights not available to normal users. It makes testing much faster and smoother if the tester has access to the SOAP requests and responses, so we strongly recommend you provide access to these, even if they are not normally logged in production.
- If IV&V find issues during testing, they will need a technical liaison to discuss these issues.

IV&V will discuss this process with you at the start of testing.

- **Should I set up a separate test environment?**

Yes. It is always best to do the testing in a separate test environment, separate to your development environment.

- **Should we do a self-test before the CCA test?**

Ideally Yes. It is always best if you execute the tests yourself beforehand, to make sure you are ready for CCA testing and so the testing goes smoothly.

IV&V will execute the tests in the ADHA document *Use of IHIs in Health Software Systems - Conformance Test Specification v3.1*. You can download this from the ADHA website at <https://myhealthrecorddeveloper.digitalhealth.gov.au/resources/prepare/healthcare-identifiers-pre-requisites#step-6>.

- **Where do I find sample test data?**

ADHA have prepared test data spreadsheets called *Conformance Test Data for Healthcare Identifiers* and *HPII test data with AHPRA numbers*. You can get these by emailing ADHA at Help@digitalhealth.gov.au.

- **What are some common technical issues that IV&V find during testing?**

Mandatory requirements

Some implementers try to ignore some requirements, saying things like “Why would the IHI ever change?” or “I was just given that IHI by the HI Service, why would I need to revalidate it?”. However, many of the requirements are specifically designed to catch problems with the HI Service data such as inadvertent duplicates, and to support the HI Service’s mechanisms for resolving them. You must comply with all mandatory requirements – even if you think the data you receive from the HI Service “should not occur”.

Supporting the IHI number status

There are 3 types of IHI record status (Verified, Unverified, and Provisional) and 5 types of IHI number status (Active, Deceased, Retired, Resolved, and Expired). You must fully support Verified record status, although support for Unverified and Provisional record status is optional. If you support a record status, you must fully support all IHI number statuses – it is not sufficient to say “we only support Active/Verified status”.

Warnings and alerts

The requirements use the terms “Warning” and “Alert” in very specific ways, and they are not interchangeable. Make sure you read the definitions in the *Glossary* in the *Use of HIs in Health Software Systems - Conformance Requirements* document on the ADHA website step 5.

Note that as a bare minimum, an Alert must break the operator’s activity sequence and require specific action on their part to acknowledge it.

Audit and error logging

There are very specific requirements for audit and error logging. These are not just there for the implementer’s convenience – they are intended to aid troubleshooting in the event that issues are found with the HI Service data. Many implementations routinely log all SOAP messages. This will cover many, but not all of the logging requirements – make sure you read the requirements carefully.

Resolved status

There are some specific requirements concerning Resolved number status that many developers miss. Note that in most cases if you get a Resolved number status from the HI Service, you must revalidate the new number before you can use it as a replacement for the old number. This will require a second HI Service request to do the revalidation. You are also generally required to retain the now-resolved number in a history record so that the user can see that the number has changed.

Note also that Resolved number status is not returned from the HI Service in the same way that other number statuses are. The HI Service never actually returns an IHI with Resolved status – if, for example, you do an IHI number search and the HI Service determines that the number has Resolved status, what is returned is the new IHI it is resolved to and that new IHI’s status, together with an informational message saying the requested IHI has been resolved.

Provisional and Unverified IHIs

As noted above, if you support Provisional or Unverified record status, then you must fully support it. However, if you do not support them, then it is mandatory that you do not even store them. If you don’t fully support Provisional or Unverified IHIs, then if you ever received one from the HI Service for

any reason, then you must raise an alert and you must not store the IHI against the patient record. If you don't support Provisional or Unverified IHIs, then in most cases your handling is incorrect if it is possible to have an IHI stored against a patient record with the record status shown as Provisional or Unverified.

Deceased Number Status

Many implementers assume that an IHI with Deceased number status definitively indicates that the patient has died, and thus assume that they will not see the patient in a clinic and will never see the number status change back to Active. However, a careful reading of the relevant requirements will make clear that Deceased number status is merely a warning that there is a not-yet-verified report that the patient may have died. It is quite possible, and even expected, that sometimes a patient with a Deceased IHI will present at a clinic, and that sometimes an IHI with Deceased status will change back to Active status.

Error returns from the HI Service

There are various possible error responses defined for HI Service web services. Common examples are where the name includes invalid characters, or an address includes an invalid suburb/postcode combination, but there are many others. There are issues with the way the ADHA libraries handle errors and as a result it is not uncommon for these to cause exception conditions within the application leading to misreporting of the HI Service error to the user. We strongly recommend that the implementers test these error conditions carefully.

- **What happens if we fail some tests?**

If issues are found, IV&V will initiate a discussion with you about these. After you make any necessary changes, IV&V will retest.

They will do their best to stay working with you until a conformant test report is achieved, within a reasonable timeframe (dependent on the nature of the problem and turnaround time). They will not just issue you with a non-conformant test report, leaving you to start again and incur extra costs.