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| HOW HIFIS LEADS PERFORM TESTING |

This *HIFIS How To* resource provides practical information on how HIFIS Leads can perform routine testing through various phases of their HIFIS implementation.

This document is divided into six sections:

1. [Preparing for Testing](#_1._PREPARING_FOR_1)
2. [The Data Lifecycle](#_2._THE_DATA)
3. [Pre-Launch Testing](#_2._INITIAL_LAUNCH)
4. [Post-Launch Testing](#_3._POST-LAUNCH_TESTING)
5. [New Release Testing](#_4._NEW_RELEASE)
6. [Related Resources](#_7._RELATED_RESOURCES)

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| **Phases of Testing**There are three **phases** of testing a HIFIS Lead could perform. * Pre-Launch Testing – This is the testing performed before you go live with HIFIS in your community.
* Post-Launch Testing – This is the testing performed immediately after you go live with HIFIS in your community to ensure that everything is working as it should.
* New Release Testing – This is the testing performed in preparation for a new release (or version) of HIFIS.
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There are three **types** of testing to focus on:

* Configuration Testing – Refers to the settings that one often ‘sets and forgets’ such as dropdown menu options, room and bed management, and mandatory fields.
* User Acceptance Testing – Often referred to as UAT, this involves actual HIFIS users testing out the software to ensure they can use it the way they are asked to.
* Data Quality Testing – Refers to tests that validate the accuracy, consistency, completeness, and overall usefulness of the data collected.

## 1. PREPARING FOR TESTING

There are three steps a HIFIS Lead should take to prepare for testing:

* Create a Test Environment
* Establish a Testing Team
* Design Testing Scenarios

A **Test Environment** is a place where HIFIS Leads and HIFIS Users can explore and test modules without the risk of impacting day-to-day operations, and practice entering information without impacting real-life data. A test environment typically has less technical resources (i.e. less processing power) and contains no real-life data. HIFIS Leads can reach out to the HIFIS Client Support Centre (support@hifis.ca) and their IT team for help in creating a Test Environment.

A **Testing Team** is a group of people who participate in User Acceptance Testing and who have access to the Test Environment. It should consist of staff from various roles and service providers who may use HIFIS in different ways. This team commits to assisting HIFIS Leads in testing the user experience of HIFIS. If operational pressures prevent a Testing Team from being established, a HIFIS Lead can perform all testing on their own.

**Testing Scenarios** are actions that HIFIS users are asked to perform. You should create a list of actions you have asked HIFIS Users to complete and separate it by role and/or service provider. Consider the HIFIS Users’ day-to-day responsibilities. Consult HIFIS Users, supervisors, and applicable service agreements to understand user workflows and service provider requirements.

## 2. THE DATA LIFECYCLE

Each phase of the lifecycle plays a crucial role in a community’s ability to understand homelessness and serve their community. Understanding the data lifecycle can help HIFIS Leads when creating their own testing scenarios or when developing workplans to expand and improve upon their HIFIS implementation.

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| **The Data Lifecycle*** Planning – Planning ensures that data collection efforts have a purpose and are relevant to the needs of the community. This involves determining what data the community needs to capture and how to capture it.
* Acquisition – Acquisition focuses on who is responsible for collecting the data and how it will be collected. This could involve reviewing intake processes in the community, providing training, and clarifying staff roles in data collection.
* Processing – Processing data is the identification of errors and making corrections (also referred to as data cleaning). This could involve reviewing the data periodically to ensure that it makes sense.
* Analysis and Reporting – Data analysis is the process of developing answers to questions through the examination and interpretation of data. This could involve running reports, sharing their results, and analyzing the data with decision makers.
* Preservation and Storage – Data preservation involves protecting and backing up data for a long period of time. This could involve ensuring that there are policies in place to meet privacy protection and legislation requirements for data.
* Documentation – All data management processes should be documented for all phases of the lifecycle. This could involve recording lessons learned and changes made for quality improvement and future testing.
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For more information on the Data Lifecycle and Data Management in HIFIS there is the following eLearning Course: [Data Management in HIFIS](https://learning.hifis.ca/story.html). This interactive course aims to help HIFIS Leads and Coordinated Access Leads understand the role of data as a tool to support effective service delivery and decision-making within their housing and homelessness response system.

## 3. PRE-LAUNCH TESTING

Pre-Launch testing is performed before you go live with HIFIS in your community and is the phase that will take the longest. Testing performed during this phase will primarily involve configuration testing and user acceptance testing. Data quality testing will take place after you go live with HIFIS and real data has been entered.

The primary questions you want to answer during this phase are:

* Have we configured HIFIS the way we want it?
* Can HIFIS Users perform the tasks required of them?

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| **Steps to Take When Pre-Launch Testing**1. Review each chapter of the [HIFIS Configuration Guide](https://homelessnesslearninghub.ca/library/resources/hifis-configuration-guide/) and make decisions about how you want to configure HIFIS. Record these decisions in a document for future reference. This step may be performed with other decision makers in your community as it involves user rights templates and software behaviour.
2. Implement your configuration choices in **both** the Test Environment and your Production Environment (your production environment is the one that will be used by staff to enter real data).
3. Give your list of testing scenarios (see section 1 on [Preparing for Testing](#_1._PREPARING_FOR_2)) to your Testing Team along with the [HIFIS User Guide](https://homelessnesslearninghub.ca/library/resources/hifis-user-guide/)\* and login information for the Test Environment. Ask your Testing Team to work through the list of scenarios and record their experience and any barriers they encounter.
4. Address any barriers the Testing Team identify and ask them to go through the list of testing scenarios again if necessary.
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\*If your community has already established custom training documentation this could be provided instead of the [HIFIS User Guide](https://homelessnesslearninghub.ca/library/resources/hifis-user-guide/). Providing training documentation during testing ensures that HIFIS Users have the resources they need to perform their duties and can highlight when documentation needs to be updated.

## 4. POST-LAUNCH TESTING

Post-Launch testing is performed immediately after you go live with HIFIS in your community to confirm that everything is working as it should. This phase of testing primarily involves data quality testing and aims to ensure that data entry practices aren’t being done ‘wrong for too long’.

The primary questions you want to answer during this phase are:

* Did we miss anything in our training?
* Are HIFIS Users doing what is asked of them?
* Do HIFIS Users require more training than we initially provided them?
* Does the data being entered look the way we expect it to?

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| **Steps to Take When Post-Launch Testing**1. Find or create a list of reports that will help you review the data that has been entered into HIFIS. You can create your own custom reports using the [HIFIS Report Writing Guide](https://homelessnesslearninghub.ca/library/resources/hifis-report-writing-and-data-mapping-guide/), use the reports already available in the Report Manager, or hire a consultant to create reports for you. When picking a report, reference your list of scenarios that HIFIS Users perform and aim to have a report that displays data for each action you listed (i.e. if HIFIS Users enter shelter stays, find a report that shows shelter stay information).
2. Review the reports you have chosen and identify any areas where data is higher than you expect, lower than you expect, or missing altogether. Consult decision makers and leaders in your community to try and determine and address the cause.
3. Consult your HIFIS Users to gauge their experience with the new system. This could involve a quick survey or request for feedback. Find fun ways to encourage feedback like offering a draw for a prize!
4. Provide drop-in training sessions or additional training materials in response to your report review and user feedback.
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The steps listed above are not only necessary to perform following your initial implementation of HIFIS, but can be valuable actions to perform on a regular basis. Consider creating a “Report review and user feedback” routine that is performed periodically (i.e. every quarter or every 6 months).

Benefits of ongoing testing include:

* Identifying issues as soon as possible to prevent negative impacts
* Preventing incorrect use of HIFIS from becoming standard practice
* Increased understanding of how HIFIS Users utilize HIFIS
* Highlighting data entry strengths and areas for improvement

## 5. NEW RELEASE TESTING

Prior to implementing a new release of HIFIS, it is necessary to test the changes to the software. This phase will primarily involve Configuration Testing and user Acceptance Testing (depending on the specifics of the changes). With every HIFIS release communities receive [release notes](https://www.infrastructure.gc.ca/homelessness-sans-abri/hifis-sisa/release-notes-mises-a-jour-eng.html) detailing the changes and bug fixes. Updating HIFIS installations regularly ensures that communities are using the latest and greatest version of HIFIS. This means that communities will have access to new features and enhancements, as well as fewer bugs.

New releases of HIFIS are categorized as either minor or major releases:

* Minor releases include bug fixes and small additions or changes to the HIFIS application.
* Major releases include changes to the database or the addition of new features.

The primary questions you want to answer during this phase are:

* What is the value of the new release?
	+ Will it fix a bug that impacts HIFIS Users?
	+ Will new features improve operations?
	+ Do the new features or fixes require staff training or new documentation?
* Do we have available resources to implement the new release?
	+ Is our IT Team available?
	+ Is the Testing Team available?
	+ Is the HIFIS Lead available to coordinate and train if necessary?

Each HIFIS Release is cumulative, meaning that it contains the fixes and enhancements of previous versions. We recommend always implementing a new release when possible. If you do not have the resources to implement the new release, the chart below can be used as a guideline on when to implement a release.

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| **AVAILABLE RESOURCES** | **HIGH** | Discuss with decision makers  | ✓Implement | ✓ Implement |
| **MEDIUM** | Discuss with decision makers  | ✓ Implement | ✓ Implement |
| **LOW** | Discuss with decision makers  | Discuss with decision makers | Discuss with decision makers |
|  | **LOW** | **MEDIUM** | **HIGH** |
|  | **VALUE OF NEW RELEASE** |

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| **Steps to Take When New Release Testing**1. Review the release notes and highlight any changes that you think will impact HIFIS Users or reports.
2. Contact your IT Team and have them apply the newest release to your test environment.
3. Rally your Testing Team and have them work through the testing scenarios in the test environment. Ask them to report back any unexpected behaviour or broken functionality.
4. If the testing goes well, schedule a day to apply the new release to the production environment.
	* Communicate the plan with HIFIS Users and highlight any aspects of the new release you think will impact them.
	* Create or update training materials as necessary.
5. If the testing does not go well, you can communicate your concerns with the HIFIS Client Support Centre (hifis@support.ca).
	* If you are unable to implement a new release, the next one will contain all of the bug fixes and enhancements of previous releases.
6. After you apply the new release to your production environment, test all your reports to ensure they are performing as expected.
7. Document any changes you make to your production and test environments for future reference.
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## 6. EXAMPLE TESTING SCENARIOS

The following table outlines some testing scenarios for different types of HIFIS Users. This is not an exhaustive list and you should consider including other modules you use locally. You can use these scenarios to ensure that HIFIS Users can complete essential tasks in HIFIS after an upgrade has been installed.

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| **Shelter Workers*** Add a client
* Add a client consent form
* Book-In a client
* Change a client’s bed
* Book-Out a client
* Add a reservation
* Fulfill a reservation
* Add a service restriction
* Change a service restriction
* End a service restriction
* Add a client turn away
* Add an anonymous turn away
* Add an incident and a conflict
 | **Case Workers*** Create a family with at least 2 members
* Update a client’s housing history
* Update a client’s financial profile
* Add an assessment
* Add a call and visit log
* Open a case management case
* Add a case management session, comment, and document
* Close a case management case
* Create a housing placement
* Create a unit
* Move-in a client
* Close a housing placement
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| **Super Users*** Create a user
* Modify a user’s rights
* Reset a user’s password
* Disable a user
* Make a room inactive
* Set a bed to out of service
* Set an out of service bed back in service
* Add a bulletin
* Close a bulletin
* Create an express goods and services template
* Run a custom report
* Archive a client
 | **Administrator*** Delete a client service
* Merge two client files
* Change an application setting
* Make a field mandatory
* Make a field disabled
* Modify a look-up table
* Modify a rights template
* Upload a custom report
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Have your testing team work through these scenarios and report if there are any issues with completing theses tasks.

## 7. RELATED RESOURCES

* HIFIS Client Support Centre
* [HIFIS Configuration Guide](https://homelessnesslearninghub.ca/library/resources/hifis-configuration-guide/)
* [HIFIS Implementation Guide](https://www.homelessnesslearninghub.ca/library/resources/hifis-implementation-guide)
* [HIFIS User Guide](https://homelessnesslearninghub.ca/library/resources/hifis-user-guide/)
* [HIFIS Report Writing Guide](https://homelessnesslearninghub.ca/library/resources/hifis-report-writing-and-data-mapping-guide/)
* [HIFIS Release Notes](https://www.infrastructure.gc.ca/homelessness-sans-abri/hifis-sisa/release-notes-mises-a-jour-eng.html)
* [HIFIS Data Management eLearning Course](https://homelessnesslearninghub.ca/library/resources/data-management-elearning-course-for-hifis/)

## 8. HIFIS SUPPORT AND STAYING CONNECTED

* Have feedback or a “HIFIS How To” tip to share with your peers? Contact the HIFIS Client Support Centre by **email** at support@HIFIS.ca or **phone** 1-866-324-2375.
* For helpful guides on HIFIS, refer to the HIFIS Toolkit on the [Homelessness Learning Hub](https://homelessnesslearninghub.ca/):
	+ [Implementation Guide](https://homelessnesslearninghub.ca/library/resources/hifis-implementation-guide/)
	+ [Installation Guide](https://homelessnesslearninghub.ca/library/resources/hifis-installation-guide/)
	+ [Configuration Guide](https://homelessnesslearninghub.ca/library/resources/hifis-configuration-guide/)
	+ [User Guide](https://homelessnesslearninghub.ca/library/resources/hifis-user-guide/)
* For questions about HIFIS contact the HIFIS Client Support Centre by email at support@HIFIS.ca or phone at 1-866-324-2375.
* To receive the HIFIS Newsletter send a request to sign up by email at info@HIFIS.ca.