HMIS Software Vendor Monitoring Tool

Introduction

The United States Department of Housing and Urban Development (HUD) developed the data collection and reporting requirements for Homeless Management Information System (HMIS) through the 2004 HMIS Data and Technical Standards Final Notice. HUD does not expressly dictate how HMIS software vendors (vendors) meet the standards set forth; rather, HUD details that each Continuum of Care (CoC) have a compliant and operational HMIS that maintains fidelity to the data collection and reporting expectations defined in the HMIS Data and Technical Standards, program-specific guides, and reporting specifications. The CoC Program Interim Rule gives CoCs authority over HMIS and states that all CoCs must have an HMIS governance structure that details who is responsible for assuring and monitoring a compliant HMIS. This governance structure varies from CoC to CoC, but generally is the responsibility of the CoC Board, data committee, or HMIS Lead. A successful HMIS implementation will have the following three characteristics:

1. A compliant HMIS software that generates all HUD and federal partner reports, meets HUD's technical and functional requirements, and provides additional functionality or reporting capability as defined by the CoC.

2. An HMIS Lead that has been designated by the CoC to operate the HMIS on behalf of the CoC and has appropriate capacity to administer and manage the HMIS for the CoC and HMIS stakeholders.

3. Clearly defined contracts and agreements that delineate roles and responsibilities across all HMIS stakeholders, including HMIS end users, the HMIS Lead, and the vendor.

> ### _Case Study_
> _The CoC leadership has the same vendor for three years. Invoices are submitted and paid on time, and once a year the contract between the parties is renewed. There have been no major issues with the vendor. However, the CoC received an internal audit finding that requires monitoring of all contracts, including the HMIS Software Vendor Contract. A monitoring protocol needs to be established._

This HMIS Software Vendor Monitoring Tool provides CoC and HMIS leadership with basic information to help establish, maintain, and enhance a monitoring procedure that ensures vendors and their software products are consistent with HUD guidance and meet the needs of the CoC. This monitoring tool will provide CoCs, HMIS Leads, and other stakeholders with the knowledge and understanding they need while they accomplish the following:

- Define the purpose of monitoring,

- Identify what activities comprise the monitoring process,

- Apply measures and metrics to track performance improvement and assess monitoring outputs and outcomes,

- Implement an action plan or quality improvement process to address monitoring findings, and

- Incorporate a transparent and proactive vendor monitoring process into CoC and HMIS Lead expectations and performance management activities and tasks.

The HMIS Software Vendor Monitoring Tool is intended to be used with the HMIS Software Vendor Capacity Checklist to ensure that the vendor and software are performing according to the CoC's specifications.

Purpose of Monitoring

The purpose of vendor monitoring is to:

- **Observe** and **check** the **progress** or **quality** of the HMIS software **over a period of time.**

- **Keep** the HMIS software and vendor **under systematic review**.

Case Study Continued

CoC leadership called the vendor and said, "We've identified several items that I'd like to go over with you on a scheduled meeting. I am going to walk through a list of questions and record your answers. We will do this on a regular basis and keep an ongoing list of monitoring questions and answers and we will check in prior to the next contract renewal on any outstanding items that we need to address together before we get into the next contract year. Does that sound good to you? Feel free to come to the conversation with your own set of questions for me. I will make sure to have documentation of my questions and where the requirement came from. I ask that you do the same." The vendor agreed to the meeting, and the first Monitoring Event was scheduled.

Successful monitoring is:

- Proactive,

- Follows a schedule, and

- Maintains oversight of mutually agreed-upon expectations.

Monitoring is not meant to be reactive, or occur as a response to an event. **Monitoring is intended to be a stand-alone event that occurs on a regular timetable and is based on a set of procedures followed each time a monitoring event**

occurs. Areas such as product features, service support agreements, and uptime commitments are examples of what may be monitored. Entities, services, or products that are monitored can include vendors, HMIS software contracts, HMIS administrative and support services, and the compliance and functionality of the HMIS software itself. As a result, CoCs, HMIS Leads, and other stakeholders that are involved in the monitoring process can

comprehensively define the monitoring activities that are applicable to either the vendor as an organization and technology services provider or the HMIS software as a specific database and reporting platform. The monitoring process, metrics and measures, and improvement strategies will differ between what is being monitored.

Your vendor can be a critical partner to help your CoC achieve performance goals. An HMIS software can fill a variety of needs for a CoC, including (but not limited to) HUD-required reporting. For example, your vendor can also be critical in supporting your CoC's coordinated entry systems and data integration with non-HMIS homelessness datasets. In each instance, there must be clearly defined expectations outlined in a contractual agreement.

Monitoring is an excellent opportunity to strengthen a feedback loop or create a continuous improvement cycle that might not otherwise exist. Monitoring can help establish a way to communicate with the vendor your CoC's list of needs and wants and allow the vendor a process to demonstrate successes and explain perceived shortcomings to the CoC in a transparent way that may help improve relationships and collaboration between the CoC, HMIS Lead, and vendor. Ideally, inform your vendor during the request for proposal (RFP) process, or as soon as possible following the RFP process, that monitoring will occur.

Monitoring can be a tremendously useful exercise that forms a foundation for successful HMIS activities for years to come. CoCs are continuing to explore innovative ways in which HMIS can be used as a tool to prevent and end homelessness, including enhanced coordinated entry functionality, real-time data analyses, data integration with health care partners, and increased reporting capabilities. Defining the elements of the HMIS implementation and the contractual obligations under which they are to be monitored is more effective as a collaboration between the leads and vendors. As a best practice, include HUD-mandated reporting and technical requirements as well as locally defined HMIS functionalities and enhanced reporting capabilities.

HUD's [Data TA Strategy to Improve Data and Performance](#) outlines characteristics of high-performing CoCs and the ways in which HMIS can be used to support strategies to prevent and end homelessness.

Monitoring Activities

The HMIS Lead is the entity designated by the CoC to operate the CoC's HMIS on its behalf and is responsible for managing the HMIS for the CoC's geographic area in accordance with the CoC Program Interim Rule and any HMIS requirements prescribed by HUD. Therefore, it is important the contract with the vendor reflect their contractual obligations to provide a system in compliance with the CoC's responsibilities for operating an HMIS. The implementation of a monitoring program provides the opportunity to clarify where there might be contract issues as opposed to assumptions of wants and needs.

While the HMIS Lead may be the most appropriate entity to conduct monitoring activities with the vendor, the CoC is still ultimately responsible for implementing a compliant HMIS. Remember that the CoC leadership and the HMIS Lead might also be one and the same. In short, monitoring activities are best carried out by the entity with contractual connections to both the CoC leadership and the vendor.

The monitoring activities may draw from a variety of both qualitative and quantitative sources.

- End user surveys may gauge satisfaction with software's ease of use.
- Contract review cross-walked with activities performed may show gaps in service.
- Report validation with HUD's programming specifications may ensure that the software

can produce HUD-mandated reports in a timely and accurate manner.

- Metrics related to timeliness and attentiveness in responding to the HMIS Lead's requests for training or technical support could also be of high importance.

Some vendors also supply system administrative or operational services. It is important to carefully define which services are the responsibility of the vendor or the HMIS Lead.

Monitoring activities can be categorized as follows:

1. **Review** agreements.
2. **Establish** a list of monitoring questions.
3. **Ask** the monitoring questions and utilize the [HMIS Software Vendor Capacity Checklist.](#)
4. **Write** a report of your findings.
5. **Utilize** the monitoring process.

1. Review

This is the crucial first step in creating your vendor and software monitoring process. Look at RFP responses, executed contracts, statements of work, memorandums of understanding (MOUs), or other documents that frame the relationship, work plan, deadlines, expectations, and the invoice/payment process with the vendor.

Ask questions such as:

- Who oversees the contract with the vendor?
- Does the contract include measurable outputs and outcomes for each software service being provided?
- Is there a monitoring protocol in place already? If so, how and by whom is monitoring being conducted?
- How can you enhance the existing protocol to include additional areas to monitor, if necessary?
- What does the vendor invoice the CoC or HMIS Lead for and is the level of detail in the contract and other documents sufficient to measure and monitor?
- Who gets the invoices?
- Who pays the invoices, and how frequently are they paid?
- What is the requested amount based upon?

Once the contracts, agreements, and RFP are reviewed, then monitoring items can be determined based on the contracted agreements.

2. Establish

When you establish a monitoring protocol, it means that you create a list of monitoring questions to ask of your vendor and the monitoring schedule. Establish what is already in agreement somewhere (already written down), a list of additional things that are important but may not be written down yet (if possible and agreeable to the vendor), a schedule for monitoring on a regular basis (monthly, quarterly, annually) and what type of monitoring (on-site or over the phone) occurs at which frequency. Put them all in one document, called an HMIS Software Vendor Monitoring Plan, so that you can come back to the plan again and follow the same procedure. This establishes transparency, objectivity, and fairness in the

monitoring process by communicating expectations in writing to HMIS stakeholders, including both the entity and entities that are conducting the monitoring as well as the vendor that is being monitored.

3. Ask

In this step, ask the monitoring questions (think of it as an interview process) either on-site or over the phone. On-site monitoring visits show commitment to quality, expectations for professionalism, and industry-standard client engagement. However, paying the vendor to be on-site or visiting them is often costly and not covered within the tight funding for HMIS. Phone-based monitoring events can be just as effective. Resources and time may be the determining factors for what type of monitoring will occur. Check local agency protocols and audit requirements; you may find that there are prescribed procedures that will dictate what type of monitoring event you are required to initiate. If your CoC is working with a new implementation, consider incorporating how the vendor is meeting points of the approved implementation plan to provide information that informs future monitoring. This could include maintaining an up-to-date project plan, meeting deliverable deadlines and quality or performance indicators, and conducting qualitative assessments related to training efficacy and technical support. Additionally, there are industry-standard performance reports that could be used. These include, but are not limited to:

1. System uptime,
2. System administration training quality,
3. Helpdesk ticket response time and quality.

> *Case Study Continued*
> *The contract manager, CoC leadership, and HMIS Lead gathered materials relevant to the relationship with the vendor, including emails and project plans. The group catalogued everything they had requested of the vendor over the years and prioritized a list of 20 items that were deemed "critical."*

The Vendor Monitoring Tool (Appendix A) provides guidance for a monitoring approach, including examples of common functionalities that many communities need from their HMIS software and have defined in their contracts with their vendors. The table also provides suggestions on how to verify or assess certain HMIS capabilities and functions. This also gives the opportunity to assess areas of strength and areas needing improvement. Included are examples of HUD minimum HMIS requirements that can be supported from current documentation found on the HUD Exchange. Populate the additional rows (and add more as needed) with the specific monitoring questions established in Step 1 of this document.

4. Write

In writing the report of your findings, determine who will review the report, what actions need to be taken (or not) and document the process for the CoC's review and acceptance of the monitoring findings:

- Be detailed and thorough using actual local examples.

- Document vendor responses verbatim where practical.

- Ask for the "remedy" of items checked "no" (or whatever indicates "no" in the local scoring process) within reasonable deadlines, mutually agreed upon by the CoC and vendor. Ask for reasonably projected deadlines for remedies and a commitment to proactive notification if/when your vendor finds these cannot be met.

- Utilize a project management approach of clearly defined expectations, dates for completion, and consequences for not correcting actions. Define who will approve the corrective plan from both CoC and vendor perspectives.
- Keep in mind that the best use of the monitoring process is as a strategic and proactive quality improvement mechanism. The monitoring process, including results or findings and remedies and action steps, can ultimately improve the ability of the vendor to meet the needs of the CoC and ensure that HMIS is a valuable tool in a CoC's response to preventing and ending homelessness.

5. Utilize

Now that the monitoring process has concluded, use the process and findings to:

- Shore up requirements in writing.
- Negotiate contract amendments.
- Establish procurement efforts as needed.

Check back in on remedies by the deadline and on the next monitoring visit. Monitoring findings may indicate functions, roles, and responsibilities that are not being fully met by the vendor or CoC leadership or HMIS Lead or Contract Manager(s) on both sides of the contract. Various quality improvement management[1] frameworks can successfully be utilized to strengthen the vendor's contractual agreement with the HMIS Lead to improve the HMIS implementation. Successful results can be rewarded with additional scopes of work and ongoing relationship-building activities. This can include additional technical assistance events on a more frequent basis to encourage continual improvement.

> ### *Case Study Continued*
> *After the monitoring concluded, the CoC leadership, HMIS Lead and Contract Manager got back together to review the findings of the monitoring and to create a report of the event that could be shared with other CoC members and could be used as part of the Contract Management process (when determining whether to extend or amend in future years). A project plan was established to follow up on monitoring findings that required follow-up or a remedy. The CoC leadership also scheduled a follow-up call with the vendor to check in on the process and make any revisions needed for the future.*

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[1] Quality improvement strategies and frameworks take many forms: lean management, total quality management, six sigma, continuous quality improvement, etc. The goal is to ensure everyone involved in the project has the means to question the process at any time and to engage in efforts to improve the process and, by extension, the project itself.

Conclusion

Monitoring is an important function of managing an HMIS implementation, whether you are the CoC leadership, the HMIS Lead, or the contract manager. It is also beneficial to all parties involved as it has the potential to address deficiencies in the implementation of software and policies and procedures before they have an adverse impact on the project(s) overall. Monitoring demonstrates a commitment to quality and is often a legal requirement of contracts. Using what is already written down in the contract and other project planning documents, along with thorough reviews of activities and outcomes of efforts already concluded, can help generate a list of monitoring items that—when repeated and reported on a regular schedule—can vastly improve the overall impact of HMIS implementations locally. The process of monitoring the HMIS software and vendor is a reminder that HMIS is a critical aspect of a CoC's effort to prevent and end homelessness.

Appendix A: Vendor Monitoring Tool

Issue	Result	How to verify
The HMIS software is available for CoC use with limited unplanned downtime for maintenance.		Request uptime reports.
The vendor maintains backup, restoration and recovery procedures, off-site secured data storage, and emergency technical support.		Review of database infrastructure documentation and applicable security certifications held by the vendor.
The vendor provides a disaster recovery plan.		Request details of the disaster recovery plan.
The HMIS software has sufficient security protocols, including end-to-end data encryption, automatic time out or lock out, concurrent login prevention, username and password access requirements, 128-bit+ encryption, SSL certificate, and an automated audit trail.		Example test scenario: In the test environment, perform table look-up on users noting passwords hashed within the table. Observe HTTPS in use.
The HMIS software can protect data to the different federal and local privacy laws as needed; these laws are not universally applicable (Health Insurance Portability and Accountability Act (HIPAA), 42 CFR Part 2).		Example test scenario: In the test environment, create a test user and assign it to one project with relatively little need for client data. Retrieve a test client who is in multiple projects with much data not meant for the test user's project. Ensure that the test user only sees data for the intended project, and NOT for other projects.
The HMIS software has features that allow those with disabilities or with special needs to enter and report data (508 Compliance).		Review accessibility features provided in the software or accommodations provided by the vendor or partner.
The HMIS software contains all the Project Descriptor Data Elements (PDDE) and response categories.		Note that all were configurable. Observe all on-screen within the project and organization ID.

Issue	Result	How to verify
The HMIS software contains all the Universal Data Elements (UDE) and response categories.		See comma-separated values (CSV) and crosswalk with HUD's HMIS data standards.
The HMIS software contains all the common Program Specific Data Elements (PSDE) and response categories.		See CSV and crosswalk with HUD's HMIS data standards.
The HMIS software contains all the individual federal partner PSDE and response categories.		See CSV and crosswalk with HUD's HMIS data standards.
The HMIS software contains all the Metadata Elements (MDE).		See CSV and crosswalk with HUD's HMIS data standards.
The HMIS software can manage record duplication via a client record merger feature or other functionality.		Example test scenario: In the test environment, intentionally enter similar clients. Test the system functionality for identifying potential duplicated entries.
The HMIS software has sufficient protocols to prevent duplicate client record creation.		Observe calculations performed by the de-duplication tool.
The HMIS software can collect data at different points throughout the data collection process, including the building of client records for street outreach projects for data prior to the date of engagement.		Review workflow functionality and applicable data collection guidance to ensure appropriate dependent and independent data collection logic.
The HMIS software provides access to historical data and can archive client-level data after seven years.		Review data storage protocols provided by the vendor.
The HMIS software can dynamically manage households as members join and depart from the household.		Assess person and household identifiers in relation to HUD's guidance on metadata elements.
The vendor meets HUD and federal partner deadlines for implementing data elements, response categories, and report specification updates.		Confirm that recipients have successfully been able to submit reports on time.
The HMIS software provides up-to-date HUD-required reports, including the CoC Annual Performance Report		Observe complete report procedures. Confirm that recipients have successfully

Issue	Result	How to verify
(APR), Longitudinal System Analysis (LSA), HUD System Performance Measures (SPM), Consolidated Annual Performance and Evaluation Report (CAPER), and Data Quality Framework.		been able to submit reports on time.
The HMIS software provides up-to-date federal partner reports for HUD, Substance Abuse and Mental Health Services Administration (SAMHSA), Runaway and Homeless Youth (RHY), and the Veterans Affairs (VA).		Observe complete report procedures.
The HMIS software can create a valid CSV export per the current HUD CSV Specifications.		Observe and confirm complete export procedures.
The HMIS software can allow for flexible sharing of data by data element, program, and agency in accordance with CoC privacy protocols and the client's wishes.		Ensure software protocols align with HMIS privacy and security plans, policies, and procedures as well as with coordinated entry protocols if HMIS supports coordinated entry systems.
The HMIS software allows the HMIS administration to manage user access through a username and password.		Ensure software protocols align with HMIS privacy and security plans, policies, and procedures.
The HMIS software has multiple tiered levels of system access that provide access to only necessary data collection and reporting functionality for the HMIS user to complete their responsibilities.		
The vendor offers training.		