

Appendix E. HMIS Data Quality Performance Monitoring and Improvement Strategies

Part I. User / Front-end Data Quality

Data Completeness

Why It Matters	How to Address	How Often
For accurate reporting and to analyze trends in homelessness data over time, data needs to be complete.	Data Completeness Reports with deadlines for fixing errors	Data Completeness Reports provided to individual users / agencies monthly / every other month
Attempt to have as few null, missing, data not collected, client refused, and client doesn't know options as possible	Report Cards that may be publicly available	Report Cards publicly available quarterly (by provider or project type)
Data completeness is the easiest thing to focus on when discussing overall data quality, because it is easy to tell if a client's HMIS record is complete or not.	Set a baseline for data completeness for each project type in Policies & Procedures	Review Policies & Procedures annually and review data completeness baselines for each project type
Data collection and data entry is not a one-time event and agencies should attempt to collect data for clients served over time, as working relationships are developed and trust is built	Provide one-on-one / remedial training for users	HMIS Lead offer one- on-one / remedial training for users on an ad-hoc / regular basis

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Data Timeliness

Why It Matters	How to Address	How Often
<ul style="list-style-type: none"> • To benefit clients most immediately, data needs to be entered into HMIS in a timely manner (most directly affects clients as it relates to Coordinated Entry) 	<ul style="list-style-type: none"> • Data Quality Report that shows length of time between the date the information was gathered from the client (Project Start or other date) and the date the data was entered into HMIS • Ensure that agencies and projects entering data into HMIS have sufficient users / staff support to maintain a data timeliness standard • Showing, in real life, how lack of data timeliness directly affects clients (for example, a client not appearing on the Prioritization List for Coordinated Entry in time for a case conferencing meeting because the data was not entered into HMIS) 	<ul style="list-style-type: none"> • Data Quality Reports provided to individual users / agencies monthly / every other month • HMIS Lead talk with agencies / providers when new projects come online or agencies expand what activities they are doing in HMIS to ensure that the user base is sufficient to maintain a data timeliness baseline (proactive, not reactive – agencies talk with HMIS Lead before these changes / expansions occur, not during or after)
<ul style="list-style-type: none"> • Data also needs to be entered into HMIS in a timely manner so that reports and data visualizations are accurate and include all clients served and all data elements collected 	<ul style="list-style-type: none"> • A baseline should be set in the Policies & Procedures – the baseline may differ by project types, with some requiring more stringent data timeliness standards than others 	<ul style="list-style-type: none"> • Review Policies & Procedures annually and review data timeliness baselines for each project type

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Data Congruency

Why It Matters	How to Address	How Often
<ul style="list-style-type: none"> • When the answer to whether or not a client has any Monthly Income overall, but then there is a specific income source recorded as a “yes” with a monthly dollar amount, this is incongruency • This issue occurs most often when recording responses to the “HUD Verification” questions in HMIS: <ul style="list-style-type: none"> ○ Health Insurance Coverage ○ Disabling Conditions ○ Monthly Income ○ Non-Cash Benefits • Data congruency is an issue with responses to the 3.917 questions not being consistent among each other 	<ul style="list-style-type: none"> • HUD’s Data Quality Framework, as well as other reports that look at answers that don’t match each other in HMIS • A report that looks specifically at the 3.917 questions (Residence Prior to Project Entry, Length of Time in Previous Place, Approximate Date Homelessness Started, # of Times Experiencing Homelessness in Last 3 Years, and # of Months Experiencing Homelessness in Last 3 Years) and if any of the answers in that data set conflict with one another • Education and an understanding how the 3.917 answers can significantly skew the System Performance Measures • HMIS Lead provide ongoing trainings / ad hoc trainings about the 3.917 questions and how to answer them, as well as the HUD Verification questions and how to update them when changes occur in the client’s situation 	<ul style="list-style-type: none"> • Data Quality Framework and / or other reports provided to users / agencies monthly / every other month • Review of System Performance Measures on a regular basis throughout the year to ensure the 3.917 answers are not skewing the data in any specific obvious way • HMIS Lead offer one-on-one / remedial training for users on an ad-hoc / regular basis • HMIS Lead offer ongoing education on the effect specific data elements have on the System Performance Measures

Data Accuracy

Why It Matters	How to Address	How Often
<ul style="list-style-type: none"> • Data completeness, in and of itself, does not speak to the accuracy of 	<ul style="list-style-type: none"> • Report that look for multiple Heads of Household and no Head 	<ul style="list-style-type: none"> • Reports that look at data accuracy provided to users / agency every

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<p>the data entered into HMIS and if that is a true reflection of the client's situation</p> <ul style="list-style-type: none"> • When the data entered into HMIS is not a true reflection of the client's reality, this causes accuracy issues • Some of these can be difficult to determine, because HMIS doesn't know what HMIS doesn't know. A few, though, include: <ul style="list-style-type: none"> ○ Multiple open entries into the same project type for the same client ○ No defined Head of Household ○ Multiple defined Heads of Household 	<p>of Household issues</p> <ul style="list-style-type: none"> • Report that looks at multiple open entries into the same project type for clients / households • Regular communication with users / agencies to ensure that the data in HMIS is a true reflection of the projects' reality (does overall client count make sense, demographics served make sense, services provided, dollars spent, etc.) 	<p>month / every other month</p> <ul style="list-style-type: none"> • Discussions between users / agencies and the HMIS Lead occur as needed, at least annually during HMIS Monitoring?
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Other indicators:

Timely Entries into Project

How to Address	How Often	Why It Matters
<ul style="list-style-type: none"> • The sooner data is entered into HMIS, the sooner it is available for reporting purposes, prioritization purposes, data analysis purposes, making data-informed decisions, and more • Entering data in a timely manner also ensures that data is not lost or forgotten 	<ul style="list-style-type: none"> • Same type of tools for the overall Data Timeliness piece, but focused on the Project Start Date for clients / households • Report of project / bed / unit utilization could also be helpful • A baseline should be set in the Policies & Procedures – the baseline • may differ by project types, with some requiring more stringent data timeliness standards than others • For project types with a heavy lift for the number of clients seen and entered into the project (such as mass emergency shelters and Coordinated Entry), ensure sufficient staff are available to enter data into HMIS to maintain data timeliness baseline 	<ul style="list-style-type: none"> • Data timeliness reports provided to users / agency monthly / every other month • Bed utilization provided to users / agency every other month / quarterly • Review HMIS P&Ps annually to edit / update the data timeliness • baseline by project type, as needed • Regular communication between users / agencies and HMIS Lead to ensure that the number of HMIS users is sufficient to maintain sufficient data timeliness

Timely Exits from Project

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How to Address	How Often	Why It Matters
<ul style="list-style-type: none"> • Clients who are not exited from projects in a timely manner drive up the average length of time a client is served in the project • Can also cause overlapping open entries into the same project type for a client who transitions from, for example, one shelter to another if the client was not provided a timely exit in HMIS from the first shelter • Can cause the project to look like it is highly over-utilized 	<ul style="list-style-type: none"> • Same type of tools for the overall Data Timeliness piece, but focused on the Project Start Date for clients / households • Report of project / bed / unit utilization could also be helpful • Report of clients who have been in a project type longer than normally anticipated (for example, Emergency Shelter longer than 90 days, Transitional Housing longer than 2 years, etc.) – a “No Exits” report • A baseline should be set in the Policies & Procedures – the baseline • may differ by project types, with some requiring more stringent data timeliness standards than others • For project types with a heavy lift for the number of clients seen and exited out of the project (such as mass emergency shelters and Coordinated Entry), ensure sufficient staff are available to enter data into HMIS to maintain data timeliness baseline 	<ul style="list-style-type: none"> • Data timeliness reports provided to users / agency monthly / every other month • Bed utilization provided to users / agency every other month / quarterly • “No Exits” report provided to users / agency quarterly to verify accuracy of clients not exited from project / actively still served • Review HMIS P&Ps annually to edit / update the data timeliness baseline by project type, as needed • Regular communication between users / agencies and HMIS Lead to ensure that the number of HMIS users is sufficient to maintain sufficient data timeliness

All Clients Served are Entered

How to Address	How Often	Why It Matters
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<ul style="list-style-type: none"> • Ensuring that all clients that are served in a project are entered into the project in HMIS is important but can be difficult to report on • If the project is a shelter or housing project, the number of clients served can be compared to the number of beds / units available in the project to look for under-utilization • Ensure accurate entry of household members who enter the project after the Head of Household has been entered into the project 	<ul style="list-style-type: none"> • Report of project / bed / unit utilization for project types • Comparison of number of clients entered into HMIS vs. what the agency has stated is their target number of clients served for any given period of time • Report of “orphaned” children for households who have entered projects at different times 	<ul style="list-style-type: none"> • Reports on utilization provided to users / agencies every month / every other month • Review of clients entered into HMIS vs. what the grant states about the number of clients the agency will serve with the given project – quarterly? • Report of households who have entered into projects at varying times to users every month / every other month (depending on how often this occurs)
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Part II. HMIS Setup Data Quality

While HMIS data quality is mainly focused on the users, projects, providers, agencies, and CoCs entering data into the system, ensuring that the “behind the scenes” or provider and system setup side of HMIS is completed correctly is vital to ensure accurate reporting and functionality. As an example, HMIS Leads and system administrators should ensure consistency between the CoC’s Housing Inventory Count (HIC) Report and the projects that are reported in the Longitudinal System Analysis report, including verification of all homeless projects in the CoC, regardless of HMIS participation. Ensuring the provider and system setup of HMIS is done correctly is the responsibility of the HMIS Lead, with the support of the CoC. Reviewing the provider and system setup of HMIS should be an ongoing process for the HMIS Lead and the processes taken to ensure provider and system setup should be documented and easily replicable based on that documentation. The HMIS setup serves as the backbone for the entire system’s accuracy and data quality.

Provider Naming Convention

While the specific convention any given HMIS Lead uses will be different, consistency within the way projects are named will assist in a streamlined user experience and organize the system.

Why It Matters	How to Address	How Often
Ensuring the naming convention in HMIS makes sense, and follows a sense of order, is important, not only for internal use, but if the HMIS Lead role ever shifts to another entity, the new entity will need to know what name	Ensure that the HMIS Lead has a consistent naming convention for the system that is documented and easily understood.	This should be reviewed at least annually, if not more often.

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is attached to what project in the system.		
Naming conventions in HMIS assist in system organization, both on the user side and the setup side, and helps users know which project is which when they are entering data.	Use reports from HMIS to see what the provider names are currently, and if there is inconsistency among them, fix.	When new providers/projects come online, ensure consistency in their naming in HMIS.

Project Descriptor Data Elements (PDDEs)

The Project Descriptor Data Elements are vital in ensuring accurate reporting. HUD's [Project Setup Tool](#) and [video](#) on how to build projects in HMIS correctly are great resources for HMIS Leads.

Why It Matters	How to Address	How Often
The PDDEs in HMIS is vital to ensuring accurate reporting, as it includes project type, grants received, CoC code, bed/unit inventory, etc.	Use reports from HMIS to ensure providers have the accurate PDDEs associated with them.	This should be reviewed at least annually, if not more often.
The PDDEs also increase the efficiency and accuracy of reporting for HIC, LSA, SPMs, and other federally required reports.	When new providers/projects come online, work with organizations to ensure there is sufficient information provided to include accurate PDDEs.	The HUD HMIS Data Standards also address PDDEs extremely thoroughly and any changes will be reflected in the most recent versions.

All Necessary Data Elements Available

Each HMIS software functions slightly differently, but all of them allow for the HMIS Lead to ensure that the data elements needed for each project are available to that project to complete.

Why It Matters	How to Address	How Often
The HMIS Lead must ensure that all required data elements, by project type and funding stream, are available to all projects that need them. Any locally required data elements also must be available to all projects that need them.	Review all assessments in HMIS – availability to providers, data elements included, and compare to HUD HMIS Data Standards dictionaries.	Any time new data standards are released, assessments should be reviewed for accuracy.
This is vital for accurate reporting, data completeness, maintaining HMIS to keep in line with HUD and Federal Partner standards, etc.	Use reports from HMIS that allow for viewing which data elements are included in which assessments and which projects have access to those assessments.	When new providers/projects come online, ensure appropriate access to all necessary data elements.

Visibility

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Each HMIS software functions differently and HMIS Leads will need to understand how visibility works in the specific system to ensure that the visibility of client records in HMIS aligns with the CoC's Privacy Policy.

Why It Matters	How to Address	How Often
<p>Visibility of providers, data elements, and client records is necessary to ensure a client's right to privacy is protected and that the data is shared in HMIS when allowed.</p>	<p>Visibility can be difficult to report on easily and may need to be reviewed manually, depending on the HMIS software used.</p> <ul style="list-style-type: none"> – Review the default visibility settings of providers. – Review the default visibility of specific data elements and client records. – Review visibility groups to ensure all projects signed on to an Interagency Data Sharing Agreement are included in the group. 	<p>Visibility should be reviewed at least every six months and every time a major change occurs at any level.</p>
<p>Users must have access to the correct project types to enter data into HMIS for clients they serve. Users must have access to the appropriate data elements for the various project types in HMIS to ensure accurate and complete data entry for clients they serve.</p>	<p>Communication between HMIS Lead and users/organizations to ensure that the HMIS Lead knows what users need access to in HMIS, as well as how organizations would like their project visibility set up.</p>	<p>Ensure the documentation surrounding privacy and sharing is consistent with itself, including the client-facing ROI, HMIS Consumer Notice, Privacy Policy, HMIS P&Ps, etc. – these documents should always be reviewed in conjunction with each other and no less than annually.</p>

Appropriate Workflows

Each HMIS software functions differently and HMIS Leads must understand the specific system to ensure the most efficient and effective workflow for any given project.

Why It Matters	How to Address	How Often
<p>Ensure appropriate workflows for users for project types using the easiest/least cumbersome data entry process that allows for the highest data quality. HMIS data entry should not monopolize a user's time, as a person</p>	<p>Ensure the HMIS Lead knows the workflows available for any given project type and weigh all pros and cons of any given workflow.</p>	<p>Communication between the users and HMIS Lead should occur on a regular/ongoing basis to ensure that the workflows set up in HMIS are not burdensome or overly time-consuming for users.</p>

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entering data into HMIS is usually juggling many other required tasks, including direct client care.		
The more burdensome HMIS data entry is to users, the less likely it is to get high-quality data in the system.	Provide sufficient training materials in different venues – in-person trainings, webinars, visual guides, videos, etc. to ensure users who learn through different ways have access to sufficient resources. Provide ongoing trainings/ad hoc trainings to ensure users maintain high data quality.	HMIS Lead should be informed of any issues with the workflow as soon as it is discovered by users.

Documenting Changes Made in HMIS

Ensuring there is a “trail” for the changes made in HMIS over time is important so that all involved entities can ask and then know when and why something changed.

Why It Matters	How to Address	How Often
Documenting changes made to the setup of HMIS is important to maintain internal consistency. It is also important to have a history of what has been done to HMIS over time in the event that the HMIS Lead role shifts from one entity to another.	This could be done in different ways, including: <ul style="list-style-type: none"> – Reports from HMIS itself – An internally shared google document or excel spreadsheet – A PDF that is updated and made available publicly on a regular basis 	Documentation of changes made in HMIS should occur any time a change is made. Sharing of that documentation can occur as the community sees fit.