Data Quality Plan and Best Practices Guide
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Data quality is vitally important to the success of the Homeless Management Information System (HMIS) and the programs that use this database. The Department of Housing and Urban Development (HUD) monitors the quality of the HMIS data through programs such as the AHAR (Annual Homelessness Assessment Report) and the Super Notice of Funding Availability (NOFA).

If the quality of the data is poor, HUD may refuse to grant funding or trim future funding. Needless to say, if this happens these funding cuts could negatively affect our program(s). Since it is imperative that the data is correct, HMIS Agency providers and the HMIS Team work diligently on adhering to the HUD data standards in order to ensure all reports are complete, consistent, accurate, and timely.

This guide outlines the data quality and best practices that HMIS encourages all users of HMIS to follow.

**Why Data Quality is Important**

Data quality can be measured by the reliability and validity of client data collected in the HMIS for clients receiving assistance for homeless, prevention, and services. When reliable, accurate data is entered into the HMIS database, the CoC can portray a true accounting of the population experiencing homelessness in New Hampshire. Since the HMIS database will only process what it is given, if incorrect data is input into HMIS, the output is not likely to be useful or complete when you run your reports. The HMIS Team encourages Agencies to continue addressing data quality and run your reports at least monthly.

The data standards that HMIS must follow can be found in the document titled [HUD HMIS Data Standards](http://www.nh-hmis.org) that can be found on the NH-HMIS website at [http://www.nh-hmis.org](http://www.nh-hmis.org).

**Goals of the Data Quality Plan**

In coordination with the HMIS Advisory Council, HMIS developed a data quality plan. The goals of this plan are to:

- Help ensure the availability of timely and accurate data for use in helping to end homelessness
- Catch problems early and increase the usability of data
- Prepare data for the CoC NOFA process
- Help prepare for the upcoming HEARTH Act implementation, including Coordinated Assessment
- Prepare for the Annual Homeless Assessment Report (AHAR) to Congress
- Prepare for other community-level reporting requests

Agencies and program providers will also benefit from participating in this process by:

- Getting data cleaned up regularly so less correction is needed right before reports are due
- Having more up-to-date information readily available to inform program decisions, monitor client progress, and inform stakeholders about programs
- Implement changes when needed and measure progress against goals
Staff Roles and Responsibilities

In order to ensure data quality, staff should understand what tasks they are responsible for in their role.

Data Analyst Role

- Review the data quality reports for each CoC.
- If a provider has data quality issues, forward the report to the provider so they can fix their data.
- Review the provider list for each report.
- If there are missing or incorrect providers on the list, confirm those with the program provider(s).
- Let the HMIS team know about any changes that should be made.
- Run the Data Completeness Report Card and the Data Incongruity Locator custom reports monthly.

Agency Administrator Role

- Review data quality reports sent to you by your BHHS Data Analyst.
- If you have data quality issues, correct them as soon as possible.
- Let the BHHS Data Analyst AND the HMIS team know if you have an ES, TH, or PSH program that is missing from the list or one that shouldn’t be included.
- Run data quality reports available in ART to check client data on a monthly basis. Use these data quality reports in conjunction with your existing data checking reports frequently to check your data.
- Run HUD Universal Data Elements, Data Incongruities Reports, and other data quality reports as determined by NH-HMIS, CoC’s, and the State of NH/BHHS.
- Notify the Agency Administrator of findings and timelines for correction.
- Re-run reports for errant Agencies and/or programs, as requested and follow up with other Agency Administrators, if necessary.
- Notify the Agency Executive Director if Agency Administrators are not responsive to required corrective actions.
- Notify the CoC chair and the HMIS Grantee (State of NH/BHHS) regarding any uncorrected data quality issues.

End-User Role

- Review data quality reports sent to you by your Agency Administrator.
- Correct data quality issues as soon as possible.
- At intake, gather the most complete and accurate information you can about each client and the services they need in a timely manner.
- Attend all trainings required by HMIS staff and pass the certification test with a score over 80% or better. Sign an HMIS End User Agreement within 5 business days of initial user training.
Data Quality Reports

In ServicePoint, there are two data quality Advanced Reporting Tool (ART) reports that most Agency Administrators should run frequently. These reports can be used in conjunction with your current data checking reports and practices.

1. **HUD CoC APR 0625** – This data quality report facilitates the extraction of data for the completion of the CoC APR. The layout of the report is patterned after the HDX data input screen to facilitate on-line reporting. A companion ART report, 0631, provides details to assist in addressing data quality issues. This report should be run once a month at a minimum to confirm that complete and accurate data is being properly recorded in ServicePoint.

2. **HUD CoC APR Detail 0631** – This funding report is a companion to report 0625 and displays the details behind the CoC APR report. This report consists of several tabs, each tab focusing on specific portions of the CoC data. The report also includes features to assist in data quality monitoring such as null data flags, identification of non-HUD question values, and duplicate clients.

The BHHS Data Analyst will run several reports monthly:

1. **Data Completeness Report** – This report shows missing data and is an excellent data quality monitoring tool based upon the completion of HUD-required universal data elements at the time of the client’s service start date. In determining the percentage of non-null values, the count includes records where the primary value is null, but the accompanying data quality question is non-null. The percentage calculation also takes into account whether the client is a child, adult, or unaccompanied youth at the time of intake, and whether HUD requires the particular element to be collected for that classification of client.

2. **Data Incongruity Reports** – These reports show incongruity with client data based on age or household situation and is a tool to monitor data quality by locating recorded client data which is missing, is incorrect, or which is inconsistent with other recorded data for the same client. This report also focuses on locating errors and incongruities in the areas of age, gender, and household relationship.

Data Quality Components Definitions

In this guide, the following terms are used to define data quality. All of these components are important to consider when trying to prevent and correct poor data quality. These components are described in more detail later in this guide.

- **Accuracy** ensures that what is being recorded in a database is an accurate and true portrayal of the client’s situation and the services they need. For example, if inaccurate income is recorded for a client it could impact their eligibility for a particular program or at a broader level it could impact an Agency’s score on performance indicators relative to income.

- **Completeness** means ensuring that all of the appropriate and relevant data that Agencies or funders need is being collected about clients and the services they are accessing. While the ability to record “Don’t Know” or “Refused” responses for various data elements ensures completeness in
the system, it is important to minimize the use of these responses for data quality purposes. Complete data is required by HUD programs and is particularly important when generating reports such as the NOFA and AHAR which can affect funding for the CoC and its providers.

• **Consistency** encompasses two components:
  - There should be no contradictions in the data
  - Agencies and staff members must utilize the same definitions for capturing data

When entering data into HMIS, it is important that all users follow the HUD HMIS Data Standards, which defines each data element collected in NH-HMIS. The [HUD HMIS Data Standards document](http://www.nh-hmis.org) can be found on the NH-HMIS website at [http://www.nh-hmis.org](http://www.nh-hmis.org).

• **Timeliness** refers to how recent the information is in the HMIS database. How up-to-date the data is becomes an important component and ultimately impacts the accuracy of the data as well. For example, if a manager asks how many clients are currently in the program and no data entry has taken place, that information could not be easily pulled by the Agency without pulling client hardcopy files or other spreadsheets. Additionally, if an Agency serves a client and previous assistance received by the client has not been recorded or updated in HMIS, services may be duplicated. Likewise, client information may change over time. If updated information is not recorded in the system, analysis is done on old, inaccurate information. For this reason, HMIS requires all data collected to be input into HMIS within three business days.

• **Training** helps ensure that Agency Administrators and End-Users are all kept up-to-date on the latest ServicePoint software releases, are entering data correctly into HMIS, and are adhering to policies and procedures. Training resources include:
  - the HMIS website [www.nh-hmis.org](http://www.nh-hmis.org), where training videos and extensive documentation including guides, intake forms, and workflows for multiple programs including ESG, SGIA, SSVF, and GPD can be found
  - online GoToMeeting training

HMIS provides annual Agency Administrators, End-User, and ART Reports training. For this training, a trainer from Bowman Systems (our software provider) comes to New Hampshire and classes are provided for each CoC in 3 locations. This End-User and Agency training is a major component to ensuring that data quality procedures are followed.

• **Monitoring** helps to ensure accurate data by frequently reviewing data and making necessary corrections to meet the data standards outlined by HUD; thereby allowing quick resolution of any data quality issues.

• **Incentives and Enforcement** policies are an important part of the HMIS Data Quality Plan since they provide incentives for staff and reinforce the importance of good data quality client data.

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**Data Quality Components Detail**

The data quality components are described in more detail in this section.
Accuracy

1. Each CoC Data Committee will evaluate the quality of all HMIS Member Agency data on the accuracy of the data entered monthly. Accuracy is the degree to which data correctly reflects the client situation or episode as self-reported by the client.

2. All client data entered into HMIS should reflect what the client self-reported or an accurate assessment of known information by a case manager, where indicated by the HMIS Data Standards. Data captured for entry into HMIS should be what was self-reported by the client or data known by case managers. HUD procedures allow case managers to make changes to client data not reported by the client.

3. All client data entered into HMIS should be consistent with the type of program. Client records entered into HMIS should reflect the client population served, match capacity of enrollment, program type, and entry/exit should fall within service parameters. This information is based on consistency of accurate data entered on clients receiving services. For example, if your program:
   - is a program for men, you should not enter data on women
   - has 20 beds; there should not be any more than 20 people in your shelter unless you are using the overflow beds
   - is a fully HUD-funded program; you should only use entry/exit types of HUD

4. While HUD has defined HMIS as the ‘record of record’, if Agencies use paper-based files, they must match information entered into HMIS. All client data entered into HMIS should match the information captured and filed in the HMIS Member Agencies client record/case file. Any discrepancies could be subject to audit by HUD, HMIS staff, a local government entity or other community planner.

5. All CoC Data Committees, HMIS Member Agency providers, and HMIS staff will work together to ensure accuracy of reporting. The HMIS software includes a series of reports to aid in outcome evaluation, data quality monitoring, and analysis of system trends.

Completeness

1. The CoC Data Committee will evaluate the quality of all HMIS Member Agency data on the completeness of the data entered using detailed Data Quality Reports (DQRs), Agency reports, and other tools. Completeness is the level at which a field has been answered in whole or in its entirety. Measuring completeness can ensure that client profiles are accurately answered in whole and that an entire picture of the client situations emerges.

2. HMIS Member Agencies will be expected to have no more than 5% of all client data “blank/not reported/null” value rate for all clients entered into HMIS (or 95% or above completeness). “blank/not reported/null” values include fields that are left blank or answered with a “don’t know, refused, or unknown value”. While these options may accurately reflect what the client has self-reported, this data is considered of a low quality value.
3. For all clients served and entered into HMIS by an HMIS Member Agency, all system data quality fields must be completed. In HMIS, there are several data quality fields that are essential to understanding patterns of data entry and client self-reporting. These fields are part of the Universal Data Element (UDE) requirements measured for each HMIS Member Agency. These fields measure the quality of their associated fields. For example, if the Date of Birth field has been left blank, the Date of Birth Data Quality field is used to explain why the field is blank. There are three quality fields in the system:
   - Social Security Data Quality
   - Date of Birth Data Quality
   - Zip Code of Last Permanent Address Data Quality

These fields allow for reporting only partial answers or full answers in order receive completeness credit. These fields in conjunction with the associated data element field will be used to assess data quality issues.

4. The HMIS staff may provide customize reports to HMIS Member Agency providers as a fee-based service. A request must be submitted to the HMIS staff for evaluation and fee determination.

**Consistency**

1. The CoC Data Committee will evaluate the quality of all HMIS Member Agency data on the consistency of the data entered.

2. All HMIS Member Agency client data should work consistently to reduce duplication in HMIS by following workflow practices outlined in training. HMIS Member Agencies are trained to search for existing clients in the system before adding a new client into the system. Client data can be searched by Client ID, Name, Social Security Number, and Client Alias. HMIS Member Agencies are encouraged to follow this protocol.

3. HMIS staff reviews data entries in the database for duplicate entries. Since there cannot be duplicates, the staff must research and merge client records. When duplicate client records created by HMIS Member Agency providers are discovered, the HMIS staff will contact the designated Agency Administrator to notify and address the user creating the duplication so future duplications can be avoided.

4. All HMIS Member Agency client data should adhere to HMIS capitalization guidelines. HMIS Member Agencies are trained on the current method and style to enter client level data. No HMIS Member Agency should enter a client name in any of the following ways:
   - ALL CAPS
   - all lower case
   - Mix of lower and UPPER cAse LeTters
   - Nicknames in the Name space -- use the Alias box instead

For more data entry guidelines, see the document *Data Quality – Common Errors and Useful Reports* on the NH-HMIS website at [http://www.nh-hmis.org/](http://www.nh-hmis.org/).
**Timeliness**

1. The CoC Data Committee will evaluate the quality of all HMIS Member Agency data on the timeliness of the data entered. Timeliness is an important measure to evaluate daily bed utilization rates and current client system trends. To ensure reports are accurate, Member Agencies should ensure that their internal processes facilitate real-time data entry.

2. All data must be entered and updated as required, including data elements that are monitored such as Universal Data Elements (for HUD and VA), entry/exits, and services.

3. Weekly Daily Unit Reports should be run to determine program capacity.

4. All data must be entered and updated as required, including data elements that are monitored such as Universal Data Elements (for HUD and VA), entry/exits, and services.

5. Weekly Daily Unit Reports should be run to determine program capacity.

6. All HMIS Member Agency providers should back date any client data not entered in real-time to ensure that the data entered reflects client service provision dates. All required data elements including program entry/exit, service transactions, universal data elements, and bed management must be entered for each client within 24 hours of program entry/exit or service dates. If the date was entered more than 24 hours later than the program entry/exit or service provision, the actual data of service or entry/exit must be used.

7. All CoC Data Committees, HMIS Member Agency providers, and HMIS staff will work together to ensure the highest quality of data in HMIS. Due to the many reports and projects the HMIS staff is asked to provide, HMIS Member Agency's' response to HMIS staff inquires and correction of data quality issues is critical. Many programs have very rigid time frames in which the HMIS staff must provide updated information.

8. All Agency Administrators should respond to HMIS staff inquiries no later than 24 business hours. In instances of vacation or illness, the back-up Agency Administrator or alternate contact should be contacted.

9. After a report that outlines data corrections has been sent to the Agency Administrator or back-up Agency Administrator, it is the responsibility of the Member Agency to correct the issues within 5 business days. Once the corrections have been made, the Agency Administrator or back-up Agency Administrator should update the CoC Data Committee chair and HMIS staff.

10. All HMIS Member Agency providers should correct client data in HMIS within the designated time constraints, depending on the program, as described below:

   a. **Emergency Shelters** - All State funded Emergency shelters are required to be licensed to provide client level data into the NH-HMIS. Programs shall utilize the entry/exit process for every client entered into NH-HMIS. All ShelterPoint data in a calendar week (Sunday 12:01 a.m. through Saturday 12:00 a.m.) must be entered by 9:00 a.m. of the following Tuesday. Minimum data elements required by HUD, including entry/exit data, must be
entered within fourteen (14) days of an individual’s entry into the program. Centralized intake requires up-to-date data.

b. Non-Emergency Shelters, Shelter Plus Care, Transitional Housing Programs, Permanent Supportive Housing and other Rental Assistance Programs - All programs in this program type are required to be licensed to provide client level data into the NH-HMIS. Minimum data elements required by HUD, including entry/exit data, must be entered with fourteen (14) days of an individual’s entry into the program.

c. All HUD-Funded Outreach Programs - Outreach programs must maintain client level data as required by the State of NH/BHHS. All programs licensed to provide client level data into NH-HMIS. Programs shall utilize the entry/exit process for every client entered into NH-HMIS. Entry/exit dates and service transactions (if applicable) must be completed within forty-five (45) days of initial contact. Outreach providers who are not currently entering client level data into NH-HMIS must provide Homeless Outreach Contact Forms for clients seen the first fifteen days of the month and the last fifteen-sixteen days of the month within five (5) business days to the State of NH/BHHS.

d. Homelessness Prevention and Rapid Re-Housing Programs - All required data will be entered into HMIS within seven (7) business days of a person’s entry into services.

Training

1. HMIS will provide training for Agency Administrators and End Users and facilitate training to be provided by Bowman Systems, our ServicePoint software vendor.

2. HMIS will ensure that adequate End-User support is available.

3. Agency Administrators who will train new staff on the uses of the HMIS must personally attend trainings offered by the Continuum, HUD or other software vendors to ensure ongoing understanding of the development of HMIS, improved technical reporting capabilities, system updates, etc.

4. All ServicePoint users must take a test that covers various topics of HMIS privacy, data collection, system security, and software usage to obtain an “End-User certification.” This certification is a requirement to using the HMIS system. Without a passing grade on this certification test, users will not have access to the HMIS database.

5. Staff who do not attend annual training will be unable to access the HMIS database.

Monitoring

1. On a monthly basis, an HMIS client detail report will be printed from HMIS to ensure that the list of current, exited clients, and service transactions are accurate.

2. The results and corrections of monthly reports will be reviewed by the BHHS Analyst and the CoC Data Committee. Should further oversight be deemed necessary, the CoC Data Committee will review all findings.

3. A Count Report should be added to user Dashboards in ServicePoint to show clients with NULL UDEs who are missing data elements or clients with Refused or Don’t Know responses.

4. Agencies will provide timely updates to the HMIS Team regarding any changes to programs.
5. Data Quality reports will be printed at a minimum of once a month and be reviewed by senior staff.
6. All staff must work to prevent duplicate data.
7. All staff must review hardcopy intake forms against the HMIS data to ensure they match.
8. HMIS staff will assist programs in correcting data and updating program information as needed.
9. Agency staff should meet at the end of each month for final review to ensure the APRs will be accurate.

Incentives and Enforcement

1. HMIS data quality reports will be prepared monthly for providers. Based on the data entered, any data quality score below 100% will need to be corrected. Staff achieving a score of 100% will be recognized by the provider for their performance.
2. Annual recognition awards will be given to providers who have substantially improved data quality and a congratulations email from the BBHS administrator will be sent.
3. During training, the importance of the data, any upcoming needs of the data, and the efficient uses of the data will be emphasized.
4. Agencies should create internal procedures to encourage their staff to meet or exceed the thresholds specified by this data quality plan.
5. During periodic job performance reviews, management staff should address data quality as part of the review process.
6. The HMIS Sponsor will investigate all potential violations of any security protocols. A Participating Agency’s access may also be suspended or revoked if serious or repeated violation(s) of HMIS Policies and Procedures occur by Agency users. Any user found to be in violation of security protocols will be sanctioned which may include, but are not limited to:
   - A formal letter of reprimand to the State of NH, CoC Chair, CoC Data Committee Chair, City of Manchester, and the Executive Director
   - Suspension of system privileges
   - Revocation of system privileges

The HMIS Policies and Procedures Manual can be found on the NH-HMIS website at http://www.nh-hmis.org/.