

# CT HMIS 2021 Data Quality Management Plan

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<b>Executive Summary</b>	<b>2</b>
<b>Why do we need a Data Quality Plan?</b>	<b>2</b>
<b>Roles &amp; Responsibilities</b>	<b>2</b>
Agencies	2
<b>Data Entry Timing by Project Type</b>	<b>4</b>
Coordinated Access Network (CAN)	5
Continuum of Care (CoC)	6
Lead Agency	6
CT HMIS System Administrator	7
<b>Data Quality Benchmarks and Goals</b>	<b>7</b>

Completeness	7
Accuracy	8
Timeliness	8
<b>Benchmark Monitoring and Corrective Action</b>	<b>8</b>
Incentives and Enforcement	9
Remediation Enforcement	9
<b>Reporting</b>	<b>10</b>
Annual Performance Report (APR)	10
Data Quality Report Which Reports do I Use?	10
How do I Run the Reports?	10
How can I correct data errors?	10
<b>Appendix</b>	<b>11</b>
Benchmarks	11

## **Executive Summary**

A data quality plan is a document that provides guidance in assuring that client level data entered into HMIS is valid and reliable. Quality data is vital for assessing effectiveness of programs in their goal of ending homelessness. Data measures are invaluable for monitoring progress toward multiple goals such as addressing racial inequity or family services within the homelessness service system.

The quality of data is determined by assessing certain characteristics such as timeliness, completeness, and accuracy. HMIS data is used for required reporting such as funder mandated reports, and annual System Performance Measure (SPM) evaluations. Data measures are also required for application submissions to the U.S. Office of Housing and Urban Development (HUD) for Notice of Funding Opportunities (NOFO) awards and other government grants for funding. Monetary distributions from these, and other funding resources, rely completely on the quality of the data that document the specific needs of the homeless population. The 2021 Data Quality Management Plan is intended to provide end users with a practical guide to support their critical role in ending homelessness.

## **Why do we need a Data Quality Plan?**

A data-driven approach to ending Homelessness in CT allows for standardized measures and evaluations on multiple levels. Erroneous data can jeopardize funding opportunities and produce inaccurate overall performance scores for the CoC's SPM metrics. Most importantly, it can directly impact outcomes for clients when information entered is incorrect or outdated. Without quality data, clients may be denied available resources, impeding the primary goal of ending homelessness. While working with our homeless population poses certain challenges with collecting and entering data, it is still imperative to have the best data quality possible. This means real time data entry whenever possible, setting and monitoring benchmark standards for data quality expectations, and supporting the end users in being successful in collecting and entering client data.

## **Roles & Responsibilities**

### **Agencies**

Agencies provide multiple types of services and often work with numerous programs and resource providers in their role of immediate assistance for clients. One of their most critical roles related to data quality is defining

expectations and providing support to their agency HMIS Data Coordinator (HDC). The HDC role may be filled by different people at different agencies. Some hold administrative roles, others have a hands-on role related to data entry, and some work directly to support end users and oversee data quality monitoring. For the purposes of this document, HDC refers to the person at the agency who works most directly with users who are inputting data. The HDCs are responsible for auditing end user data entry for completeness, accuracy, and timeliness. Part of the HDC role is assuring proper training, refreshers, and resources for end users who encounter barriers to consistently entering quality data.

Program Manager roles also are unique to the organization or agencies they work with. For the purposes of this document, Program Managers are those in the role responsible for providing direct support to the HDCs in completing all required reporting, auditing, and training. They are responsible for monitoring staffing and workload capacity to ensure all required work can be completed in a timely manner. Additionally, the Program Managers should schedule the timing of audit reports, like the Annual Performance Review (APR), by defining what intervals the report should be run to audit data quality. The APR is a report designed to assist agencies in identifying specific data issues with client-level detail to identify exactly which records are in need of review or correction.

The minimal standard for running the APR is quarterly, but agencies are strongly encouraged to run the APRs monthly or bi-weekly to review data issues. It is essential that any issues that require client contact be rectified before the agency loses contact with the client. A quarterly run of the report may prove too late to accurately correct data issues if the client can no longer be reached. Data issues identified in the APR report should be corrected within 30 days with the HDC or Program Manager checking for those corrections at the next report run. Specific data issues such as missing exit destinations or housing move-in dates can be tracked and corrected much more easily when reports are run on a regular basis.

With funding opportunities reliant upon accurate data, the roles of the Program Managers and HDCs are crucial in providing support to end users and assuring that data entry is constantly monitored and updated. Poor data quality will put programs at risk for losing, or receiving reduced, funding. Accurate data is the only mechanism we have to show the true need of the clients. Funders require documentation to properly allocate available funds to support programs in their mission to end homelessness. Running audit reports and correcting data issues in a timely manner can improve data quality and reduce errors that could endanger funding by misrepresenting the true need of the program's community.

## Data Entry Timing by Project Type

Agencies are responsible for setting timeline standards in relation to data entry, auditing, and data correction. The Connecticut Homeless Information System (CT HMIS) Policies and Procedures Policy 302 notes that data entry timeliness standards should be defined for each program type. Although best practice is always real time data entry, some programs have service types that may create a need for varied data entry timeliness standards, such as time for due diligence and document verification to assure accuracy and completeness. The benchmarks and data entry timeline table included in this document provide suggested data entry timeline standards by program type and data element. Consistent monitoring of the agency's data timeliness through the use of an APR can increase adherence to data entry standards as well as identifying barriers end users may encounter with data entry.

Document readiness is critical to housing clients in a timely manner. Document readiness refers to documents needed to verify client information such as homelessness status or income. The importance of timely entry or uploading of documents cannot be understated. A delay in documentation may mean a delay in confirming client eligibility for services or matching clients to time-sensitive housing opportunities. The HDCs and Program Managers should be prioritizing document readiness in training and auditing to help users be successful in getting documents completed and entered into the HMIS system.

## Benchmarks

The data quality benchmarks in the table below reflect the acceptable percentage of data issues by Universal Data Element and Program Type. These issues are specific to the amount of data missing from HMIS due to data not being entered by the end user (Null/Missing), or not provided by the client (Unknown/Don't Know/Refused). Because HMIS data collection is extensive and relies heavily on clients providing information, the benchmarks are not set at 100% to allow for barriers to data collection. The APR identifies metrics that have exceeded the benchmark data standards by providing an Error Rate Percentage in each data quality table, broken out by each data element. Within the APR data quality tables are drill-down reports to identify the programs and client records needing review or correction.

The Error Rate Percentages on the APR give the HDCs a starting point for reviewing and correcting data issues. When APR reports are run regularly to continuously monitor data issues, client records can be corrected quickly and end users will be given consistent feedback on their strengths and challenges with data entry. This can help to identify any training gaps or specific barriers so that action plans can be developed to improve data quality.

Universal Data Element	Universal Data Elements by Program Type Benchmark for % Null/Missing and % Unknown/Don't Know/Refused)															
	ES		TH		PH		SSO		Safe Haven		Outreach		Prevention		Rapid Rehousing	
	% Null/Missing	% Unknown/Don't Know/Refused	% Null/Missing	% Unknown/Don't Know/Refused	% Null/Missing	% Unknown/Don't Know/Refused	% Null/Missing	% Unknown/Don't Know/Refused	% Null/Missing	% Unknown/Don't Know/Refused	% Null/Missing	% Unknown/Don't Know/Refused	% Null/Missing	% Unknown/Don't Know/Refused	% Null/Missing	% Unknown/Don't Know/Refused
3.1 Name	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
3.2 Social Security Number	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
3.3. Date of Birth	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
3.4 Race	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
3.5 Ethnicity	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
3.6 Gender	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
3.7 Veteran	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
3.8 Disabling Condition	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
3.10 Project Start Date	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
3.11 Project Exit Date	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
3.12 Destination	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
3.15 Relation to HoH	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
3.16 Client Location	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
3.917 A Living Situation (ES, SO, SH)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
3.917 B Living Situation (TH, PH, SSO, CE)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%

Table 1.0 Data Error Percentage Benchmarks

Data Entry Timeliness Standards	
Data Entry Type	Total Time from Appointment Date to Data Entry
Coordinated Entry	24 Hours
Program Entries and Exits - for all Program Types	48 Hours
RRH Move-in Date	48 Hours
Emergency Shelter Data Entry	2 Business Days
Street Outreach	5 Business Days
Exit Destination Entries	5 Business Days
Client Information Updates	5 Business Days
Appointment Outcome Updates	5 Business Days
Services Provided Entries	5 Business Days
Assessments - Entry and Exit	5 Business Days
Annual Assessments	60-day window
DMHAS DDAP Assessments	6-month window

Table 2.0 Data Entry Timeliness Standards

## Coordinated Access Network (CAN)

The role of the CAN in supporting agencies in improving data quality includes assuring the Program Managers or HDCs are running APR reports regularly and following up on any data quality issues identified. They provide a supervisory level to assist agencies within their CAN in addressing barriers to improving data quality. The CAN

leadership should be working with the Program Managers and HDCs in regularly reviewing data quality and providing end users the support they need to be successful. This includes documentation of training, providing refresher training, and creating action plans for any barriers identified. Making sure end users have the support they need to enter data in real time whenever possible is one of the best ways to achieve data completeness, accuracy, and timeliness.

## **Continuum of Care (CoC)**

The CoCs play an integral role in all aspects of connecting the homeless populations with the most appropriate services and supports in order to secure housing in the most efficient and effective manner. The CoCs collaborate with partners at the local, state, and federal levels to develop policies and best practices for their programs delivering services directly to clients. They manage funding resources that may be lost or reduced if data is of poor quality. They coordinate funding from various funding sources, including HUD, the Department of Housing (DOH), and the Department of Mental Health and Addiction Services (DMHAS). The CoCs are responsible for managing all programs, report deliverable requirements, and keeping agencies up to date on changes in funder mandates and expectations. Additionally, they are responsible for ensuring data confidentiality and security by working with the agency Program Managers and HDCs in meeting training and data collection confidentiality requirements.

The CoCs assist agencies in successfully housing clients by ensuring that agencies have enough resources to properly train staff to meet the data entry standards for the varied program type requirements. They play a role in data quality and compliance by tracking long-term measures such as the SPM metrics which are completely reliant on accurate and timely data entry.

## **Lead Agency**

The Connecticut Coalition to End Homelessness (CCEH) has a leadership role in advocating for Connecticut's homeless population and collaborating with local, state, and federal partners to create policies and processes to provide robust services to communities statewide. CCEH supports efforts of the HMIS System Administrator and CoCs through collaboration and strategic planning focused on housing and support services.

The lead agency takes action to create new, or adjust existing, processes as needed to meet the changing needs of the clients. CCEH helps to create policies and processes that will assist all partners in their specific roles during unexpected challenges such as COVID-19 and funder requirement changes. They support agencies by communicating changes in HMIS or HUD procedures, such as methods for counting unsheltered clients or program data collection requirement changes.

In support of the agencies, CCEH provides a comprehensive Data Quality Management Plan Resources Document. The document is designed so that users can go to a single location to easily access resources for data entry issues and troubleshooting. Additional videos and informational materials are available on the CCEH website as well as a webinar library for specific guidelines such as how to run and interpret APR reports and Shelter Diversion training. Users can self-serve on the CCEH website to access the Data Quality Management Plan Resource Document and other resources at <https://cceh.org/data-quality/> or contact [data@cceh.org](mailto:data@cceh.org) for additional assistance.

## **CT HMIS System Administrator**

The CT HMIS Administrator, Nutmeg Consulting, is responsible for adhering to specifications set out by HUD and other federal partners for program set up and all aspects of data collection. They provide technical support and work with the CoCs and CCEH on enhancements to the HMIS system as needed to improve usability. Users rely on the HMIS Administrator for accurate reporting tools and training to properly utilize the features within the HMIS structure. The HMIS Administrator is overseen by the CT HMIS Steering Committee which serves as the decision making body while providing guidance and support.

The CT HMIS Administrator plays an integral role in training for all levels of agency staff and is responsible for developing and delivering HMIS training materials specific to each user's role. Through webinars and topic-specific training they provide information and guidance on HUD standards, HMIS utilization, and technical issues users may encounter. They are the main source of communication for system changes to data entry requirements such as updated HUD data standards, new programs, or changes in program requirements.

The training and technical assistance provides support to the agencies in meeting data quality standards. Their website ([www.cthmis.com](http://www.cthmis.com)) offers training and reference materials as well as policy updates. Additionally, users can contact the HMIS Administrator directly for assistance at any time by submitting a ticket through their help desk system at [help@nutmegit.com](mailto:help@nutmegit.com). This allows for individualized assistance for unique issues users encounter.

## **Data Quality Benchmarks and Goals**

### **Completeness**

Completeness means collecting and entering all data consistently in a standardized way. When data is not entered it results in incomplete reports and unpredictable data metric evaluations. This can also create a situation where a client's eligibility for services may be at risk if all of the details are not available. Completing all assessments is necessary to accurately evaluate where a client is on their journey in the homelessness system to



appropriately guide them to a positive outcome. It is imperative that verification documents are filled out completely and accurately.

### **Accuracy**

Accuracy is assuring that all data entered reflect the true needs and most current status of the clients we serve. Inaccurate data can create a situation where clients are not directed to the most appropriate or available resources for their most current situation. This can also slow down the delivery of housing and other services desperately needed.

### **Timeliness**

Entering data in a timely manner is important for several reasons including confirming client eligibility for services at the time they are needed and evaluation of the effectiveness of programs. Benchmark standards may vary depending on program type or other unique situations but should still be documented and adhered to as part of a data quality plan. Ideally, data should be entered in real time whenever possible. Barring the ability to enter data in real time, the guidelines table in the Benchmarks section of this document should be considered as the suggested standard timeline for data entry based on the program type. Data entry guidelines should be developed by agencies to define the expectations of end users, training policies, and auditing procedures.

## **Benchmark Monitoring and Corrective Action**

The SPM metrics are submitted to HUD in the first quarter of the Federal Fiscal Year (FFY) (Oct-Dec). Metrics should be reviewed by the CoCs to identify programs, agencies, and specific data points needing review for data quality. The CoCs should communicate with CAN leadership on which agencies within each CAN have data quality concerns. The CANs can reach out to their specific Program Managers or work with the HDCs on action plans to improve data quality. Action plans can include measures such as refresher training, assuring that the Data Entry Timeliness Standards are adhered to, and scheduling a cadence for the APR reports to be run for continuous data quality monitoring.

CCEH recommends the APRs be run bi-weekly or monthly in order to most quickly identify and rectify data issues. This will provide the best chance at correcting data, particularly if outreaching to a client to clarify information is required. Although the Data Entry Timeliness Standards should be used as a benchmark for timing of data entry for the various program types, keep in mind that real time data entry is always best practice. Different program types have different procedures and each agency and Program Managers should develop their own best practices to assure the highest data quality possible. Best practices for all agencies should include communicating expectations to end users as well as regular feedback on their strengths and opportunities for improvement.

The CCEH Data Quality Management Plan Resources Document provides practical hands-on tools for correcting data issues. All current resources related to data quality are included and the document is electronically available on the CCEH and CT HMIS websites so that users can access assistance in central locations. The Resources Document includes information on common data entry issues such as links to short videos, training documents, and resources available on multiple sites such as CCEH, CT HMIS, and HUD. This is a living document that will continue to be updated as new information develops and data quality standards change.

## **Incentives and Enforcement**

Incentives and enforcement of the standards in this Data Quality Plan help support and reinforce the importance of data to end users who are an integral part of the overall goal of ending homelessness. Incentives could include user recognition from the HDC, Program managers, or CAN managers when benchmark metrics are met or improved upon. Recognizing successes such as meeting or exceeding benchmarks can only be accomplished with consistent monitoring, feedback, and support for the end users. As best practice, the APRs should be run bi-weekly or monthly to review data quality. The Data Quality tables in the APR provide Error Rate information and links to client detail to identify specific records to be reviewed or corrected. Data Quality Dashboards are currently under development and will be available on the CCEH website. Both tools serve to track data quality metrics and to provide users an opportunity to see how their efforts contribute to meeting benchmark goals and improving data quality.

Program Managers and HDCs ensure that end users adhere to data entry timeline standards through APR review, data entry audits, and feedback to users. Auditing of data entry by HDCs can identify training strengths and opportunities for improvements. Action plans should be developed by the Program Managers and HDCs when timeliness or error percentage standards are not met. This will provide the end users with the support they need to consistently improve their data quality.

## **Remediation Enforcement**

Agencies that do not meet the minimum standards for data quality benchmarks will be notified by the CoC. The agency HDC is responsible for assessing additional training needs based on the type of data errors. The HDC must submit to the CoC a timeline for correcting errors and meeting the minimum data quality standards. If performance remains below the minimal benchmark or corrections are not made within the established timeline the agency's CT HMIS access may be suspended or restricted as determined by the CT HMIS Steering Committee.

## Reporting

- **Annual Performance Report (APR)**
- **Data Quality Report Which Reports do I Use?**

The APRs are tools for users to review outcome metrics for their programs. The reports can be run at any time to assess the quality of their data entry. They provide aggregate counts of the overall and specific sub-populations served, data issue explanations, and links to client level detail related to the data issues identified in the reports. These reports pull in live data at the time of the report run. This way users can identify exactly what the immediate data issues are, and which records need to be reviewed or corrected. Running the reports on a regular bi-weekly, monthly, or quarterly cadence will make monitoring and correcting data issues more efficient and effective.

In addition to the reports available in HMIS, CCEH provides Data Quality Dashboards as a self-serve tool for users to review specific data metrics in relation to meeting benchmarks. The dashboards provide a drill down feature so that users can review data issues at the CoC, CAN, Provider, and Program levels.

### How do I Run the Reports?

The APR and Data Quality reports are in the Compliance Reports section of HMIS and can be run for any organization(s) or program(s) for date ranges entered by the user. Reports can be saved so that, once set up, they are available to run at any time and can be edited and updated over time as needed. Instructions and information on running the reports can be found on the CCEH website. For step-by-step guides for reports and accessing the dashboards please visit <https://cceh.org/data-quality/> .

### How can I correct data errors?

Common data errors include data not entered (leaving a field blank), information missing such as an income amount, invalid dates, and incomplete values such as Social Security Number (SSN) missing digits. Enrollments that should be closed and overlapping enrollments are examples of other issues that can be identified with the use of APRs. The report provides data to review client assessment due dates to plan for, and follow up on, assessment completion at entry, annual updates, and client exit from the system.

For help with data correction please visit <https://cceh.org/data-quality/> where you will find information for common data issues, videos, and other resources for additional help if needed.

# Appendix

## Benchmarks

Universal Data Element	Universal Data Elements by Program Type Benchmark for % Null/Missing and % Unknown/Don't Know/Refused)															
	ES		TH		PH		SSO		Safe Haven		Outreach		Prevention		Rapid Rehousing	
	% Null/Missing	% Unknown/Don't Know/Refused	% Null/Missing	% Unknown/Don't Know/Refused	% Null/Missing	% Unknown/Don't Know/Refused	% Null/Missing	% Unknown/Don't Know/Refused	% Null/Missing	% Unknown/Don't Know/Refused	% Null/Missing	% Unknown/Don't Know/Refused	% Null/Missing	% Unknown/Don't Know/Refused	% Null/Missing	% Unknown/Don't Know/Refused
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3.4 Race	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
3.5 Ethnicity	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
3.6 Gender	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
3.7 Veteran	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
3.8 Disabling Condition	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
3.10 Project Start Date	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
3.11 Project Exit Date	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
3.12 Destination	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
3.15 Relation to HoH	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
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3.917 B Living Situation (TH, PH, SSO, CE)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%

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Street Outreach	5 Business Days
Exit Destination Entries	5 Business Days
Client Information Updates	5 Business Days
Appointment Outcome Updates	5 Business Days
Services Provided Entries	5 Business Days
Assessments - Entry and Exit	5 Business Days
Annual Assessments	60-day window
DMHAS DDAP Assessments	6-month window

Table 2.0 Data Entry Timeliness Standards