

## Appendix B. Sample Data Quality Plan

### *Introduction*

The introduction should include an explanation of why the CoC has created a Data Quality Management Plan (DQMP) – not only why it matters at the broader systems level, but also why it matters locally, with any locally relevant reasons. This should set the tone for the overall framework surrounding HMIS data quality within the CoC.

This section should also include any stakeholders involved in the creation, oversight, monitoring, and enforcement of the DQMP.

Reference [HUD TA Data Strategy](#) throughout in relevant sections.

#### **Example:**

The \_\_\_\_\_ CoC, the HMIS Lead, and providers have created this Data Quality Management Plan (DQMP) to provide actionable, measurable steps to address data quality within the Homeless Management Information System (HMIS). Data quality within HMIS affects everything we do in our work to address and end homelessness, and its importance cannot be overstated.

While focusing on data quality for federally-funded projects that enter data into HMIS is necessary to ensure accurate reporting for those grants, any project that enters data into HMIS contributes to the overall picture of homelessness within the CoC, and therefore, is expected to participate in this DQMP.

The reasons why data quality is important are many, including but not limited to:

- Requirements based on funding the CoC receives;
- Data quality, or lack thereof, can directly affect the funding opportunities for providers;
- Accurate reporting for federal, state, and local funding;
- The ability of the CoC, and providers within the CoC, to tell the story of homelessness as realistically and completely as possible; and
- The data entered into HMIS directly affects clients through the Coordinated Entry process and may determine which services they may or may not be eligible for.

The CoC will work in conjunction with the HMIS Lead to ensure all providers have access to the tools they need to ensure high data quality, including training, data quality reports, encouragements to maintain a high level of data quality, and enforcements for non-responsiveness to data quality concerns. While the HMIS Lead is responsible for a large part of the overall DQMP, the CoC will maintain a high level of involvement to ensure providers respond to data quality concerns and that the data quality within the HMIS is both acknowledged and addressed on an ongoing, iterative, continual basis and in an objective, data-driven manner.

The following addresses how the CoC will both encourage and enforce the DQMP, with transparency about how a provider's data quality can bring about both incentives and consequences. The DQMP is then broken out into the various components of data quality – completeness, timeliness, accuracy, consistency, and bed coverage. The sections will address the baseline minimum requirements to maintain a sufficient level of data quality, and depending on the section, the baseline minimum requirement will be broken out by project type. The Data Quality Monitoring Visit Report and Improvement Plan is a tool that will be used for providers and end users consistently failing to maintain a baseline minimum requirement – specifics of how that will be determined and what the tool includes is described in that section.

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The DQMP ends with an Appendix about the expectation of the HMIS Lead and the data quality baseline minimum requirements for provider and system set-up and maintenance of the overall HMIS to ensure it runs effectively and efficiently. This section is used to assist the CoC in ensuring the HMIS Lead is maintaining a high level of system set-up data quality to ensure accurate reporting on behalf of the CoC.

The DQMP is a living, evolving tool that will change as the community and its HMIS data needs change.

### *Encouragements and Enforcements*

This section should include the ways in which the CoC both encourages and enforces data quality, as laid out in the DQMP. The plan must be quantifiable and actionable, both when entities are excelling at addressing data quality and when they are failing to do so.

An explanation of how the DQMP will play into data-driven decision-making and / or the NOFA rank and review process would be good to include here.

#### **Example:**

The CoC works with the HMIS Lead to ensure providers have access to all the support and tools they need to ensure a high level of data quality within the HMIS. The CoC will monitor data quality, in conjunction with the HMIS Lead, and the following encouragements and enforcements are in place to ensure providers understand the importance of data quality within HMIS.

#### *Encouragements*

- The CoC Board will make data quality a meeting agenda item at every Board meeting and will acknowledge providers meeting a high level of data quality in the meeting minutes which will be posted on the CoC's website.
- The CoC will acknowledge the work of providers meeting a high level of data quality every quarter during the CoC General Membership Meeting, via the CoC e-newsletter, or other public forums that acknowledge the work done to address data quality in HMIS.
- The CoC will use data quality in HMIS during the annual rank and review process for CoC dollars. In order to be eligible for CoC dollars, projects will need to maintain a baseline threshold data quality requirement and will be awarded additional points for going above and beyond the baseline. Guidance on specifics of this process will be released each year with the local CoC NOFA competition process.
- The CoC will work with state and local funders to also use data quality metrics when making funding allocation decisions to providers / projects. The CoC will encourage state and local funders to use the same process the CoC uses during the annual rank and review process for CoC dollars.
- The CoC will work with providers who do not currently use HMIS and talk through the reasons why they do not use HMIS. Depending on the reasons, the CoC will work with the providers to make HMIS a realistic option.
- If possible, the CoC will provide monetary incentives to providers maintaining a high level of data quality. Guidance on specific dollar amounts to be provided and how providers will qualify for those dollars (through the form of direct monetary assistance or subsidizing of HMIS costs incurred by the providers) will be provided as available.

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### *Enforcements*

The CoC will work with the HMIS Lead to monitor data quality at the user, project, agency, and system level. Enforcements will depend on where data quality issues lie, and could include the following:

- Locking specific providers or users out of HMIS until they receive remedial or additional training from the HMIS Lead and show that data quality is a focus.
- Removing the ability of a given user to access and enter data into HMIS if data quality becomes a consistent issue that is not acknowledged or addressed.
- Restricting additional funding, or withholding funding, from projects until data quality meets, at a minimum, the baseline threshold for the given project type.
- Preventing agencies from applying for new or additional dollars during RFP processes.

### *Data Quality Benchmarks*

#### *1. Data Completeness*

This section should include a brief explanation of Data Completeness and why it's important. It should then describe how the CoC will monitor Data Completeness and provide baseline requirements for Data Completeness by project type.

#### **Example:**

Data Completeness looks at how much of the data fields for any given client, project enrollment, provider, agency, or system are filled in or answered. The definition used in the [CoC Data Quality Brief](#) is: “The degree to which all required data is known and documented.” Data Completeness looks at missing or null values; “data not collected” values; and depending on the data field, “client doesn’t know”, “client refused”, and / or “other” values.

Data Completeness is usually one of the first pieces of overall data quality that is addressed because it is the simplest to measure – it is easy to report on what is or is not in HMIS, based on what is required to be in HMIS for any given project type.

The HMIS Lead will run Data Completeness reports on a bimonthly basis and send to providers. Those providers who fall below the baseline requirement for Data Completeness for their project type will be asked to clean up their data within a certain timeframe. For consistent issues with Data Completeness, providers may be directed to create a Data Quality Improvement Plan (DQIP).

**\*\*\* Suggested baseline requirements by project type for data completeness. Note that these are used as examples and should be customized for each CoC. \*\*\***

#### *Street Outreach*

- 90% of required data elements (only applies after client has a Date of Engagement)

#### *Emergency Shelter*

- 95% of required data elements

#### *Services Only (excludes Coordinated Entry)*

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- 90% of required data elements

### *Transitional Housing*

- 98% of required data elements

### *Rapid Rehousing*

- 100% of required data elements

### *Permanent Supportive Housing*

- 100% of required data elements

### *Coordinated Entry*

- 100% of required data elements (only applies after client reaches a specific point in the Coordinated Entry process)

### *Homelessness Prevention*

- 90% of required data elements

## 2. Data Timeliness

This section should include a brief explanation of Data Timeliness and why it's important. It should then describe how the CoC will monitor Data Timeliness and provide baseline requirements for Data Timeliness by project type.

### **Example:**

Entering data into HMIS in a timely manner is necessary to ensure that clients receive the services they need in a quick and efficient manner. Additionally, timely data entry ensures that regular, accurate reporting can be done through HMIS. Users who enter data into HMIS in a timely manner are less likely to make data entry errors and are more likely to focus on overall data quality. Per a [July 2005 publication](#), HUD recommends that projects enter data into HMIS, at most, within 48 hours of collecting the information from the client.

The HMIS Lead will run Data Timeliness reports on a bimonthly basis and send to providers. Those providers who fall below the baseline requirement for Data Timeliness for their project type will be asked to work with the HMIS Lead to make sure that they can meet the Data Timeliness standard moving forward. For consistent issues with Data Timeliness, providers may be directed to create a Data Quality Improvement Plan (DQIP).

\*\*\* Suggested baseline requirements by project type for data completeness. Note that these are used as examples and should be customized for each CoC. \*\*\*

### *Street Outreach*

- Live time or within 24 hours of contact with the client.

### *Emergency Shelter*

- Live time or within 24 hours of contact with the client.

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### *Services Only (excludes Coordinated Entry)*

- Live time or within 48 hours of contact with the client.

### *Transitional Housing*

- Live time or within 48 hours of contact with the client.

### *Rapid Rehousing*

- Live time or within 48 hours of contact with the client.

### *Permanent Supportive Housing*

- Live time or within 48 hours of contact with the client.

### *Coordinated Entry*

- Live time or within 24 hours of contact with the client.

### *Homelessness Prevention*

- Live time or within 48 hours of contact with the client.

## 3. Data Accuracy

This section should address Data Accuracy and why it's important. This section should also address how Data Accuracy will be reviewed.

### **Example:**

Data Accuracy is not as easy to manage or monitor and requires specific reports that look at congruency between and among responses to data elements within the system, as well as checks between what the client has told an intake worker and what data is entered into HMIS.

The HMIS Lead will run Data Accuracy reports on a bimonthly basis and send to providers. The goal for all project types and all data entered into HMIS is 100% Data Accuracy. Those providers who show issues with Data Accuracy will be asked to clean up their data within a certain timeframe. For consistent issues with Data Accuracy, providers may be directed to create a Data Quality Improvement Plan (DQIP).

Data quality reports will look at Data Accuracy between and among responses to data elements including:

- Date of birth and project start date (ensure the two are not the same, especially for Heads of households);
- [3.917 data elements](#) (ensure that the responses to [residence prior to project entry](#), length of time in previous place, approximate date homelessness started, number of times experiencing homelessness in the last three years, and number of months experiencing homelessness in the last three years do not conflict with each other);
- Disabling Condition yes / no and types of disabling conditions (ensure these do not conflict);
- Health Insurance yes / no and sources of insurance (ensure these do not conflict);
- Income yes / no and sources of income (ensure these do not conflict);
- Non-Cash Benefits yes / no and sources of non-cash benefits (ensure these do not conflict);

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- Domestic violence victim / survivor and subsequent data elements (if the first answer is no, are the other questions answered, and vice versa);
- Relationship to head of household (are there multiple heads of household or no head of household?);
- Client location (is the client location defined as a community outside of the applicable CoC?);
- Veteran (is a minor-aged individual defined as a veteran?);
- A given project only includes clients of a specific gender (if that project is not dedicated to only serving a specific gender)

Additionally, the [Longitudinal System Analysis Guide](#) (see Appendix A in the LSA Guide) looks at specific data quality issues in relation to that systemwide submission to HUD on an annual basis. These specific data quality and data accuracy pieces should be addressed in the reports run by the HMIS Lead on an ongoing basis.

The CoC, in partnership with the HMIS Lead, will also work with providers to review, at regular intervals, the data collected directly from clients, either on paper forms or by being present during intakes with clients, and the data entered into HMIS to ensure that the data entered into HMIS matches the client's reality. This will be done, at a minimum, during annual formal onsite monitoring visits, and will also occur at other points throughout the year.

### ***4. User Access and Consistency***

This section should address users and their access to HMIS, as well as an expectation that users are accessing the HMIS on a regular basis to complete data entry.

#### **Example:**

Users with access to HMIS should be entering data on a regular and consistent basis, not only to prevent a backlog of data entry, but also to ensure users maintain familiarity with the HMIS and the workflows for which they are responsible.

The HMIS Lead will monitor user log in and access to HMIS bimonthly by running a report that shows when users last logged into the system. If users have not logged into HMIS within the last 30 days of the report run date, the HMIS Lead will contact the user and ask if they still need access to the system. If the user responds that they do still need access, the HMIS Lead will ensure that the user has maintained sufficient data quality and does not need remedial training. If the user does not have a high level of data quality, the HMIS Lead will provide remedial training for the user.

If the user is non-responsive to any inquiries about their access to HMIS, the HMIS Lead will contact the user's direct supervisor and include the CoC Lead. If the HMIS Lead is informed that the user is no longer an active participant in HMIS data entry, the user's license will be removed from HMIS. If the direct supervisor of the user informs the HMIS Lead that the user is still an active user, the user will be required to connect directly with the HMIS Lead to complete any necessary remedial trainings to maintain a high level of data quality in the system.

Should the HMIS not hear from either the user or the user's direct supervisor, the user license will be removed from the system.

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### 5. HMIS Bed Coverage

This section should address HMIS Bed Coverage and why it's important. It should talk through how the CoC and HMIS Lead can address bed coverage and what to do when new projects come online.

#### **Example:**

The importance of a high percentage of HMIS Bed Coverage for all project types is an emphasis of the [HUD TA Data Strategy](#). Without a high percentage of HMIS Bed Coverage within a CoC, the data within HMIS is never wholistic and the story told with HMIS data about homelessness within the CoC is never fully accurate. A lack of high HMIS Bed Coverage prevents CoCs from truly understanding how both their system, and the clients served within their system, are functioning.

While extrapolation techniques can work for some research and reporting purposes, the extrapolation will only be as accurate as the similarities between any given projects, processes, and clients served by the projects. Therefore, the goal for HMIS Bed Coverage for all project types is 100%.

The HMIS Lead, in conjunction with CoC Lead, will ensure that bed coverage is as close to 100% as is possible for all project types. This includes a review of the CoC's most recent Housing Inventory Chart (HIC) to know which providers participated in the most recent HIC but are not entering data into HMIS.

Ensuring a CoC's HMIS Bed Coverage reaches 100%, and stays at 100%, also requires implementing a process to ensure that any new projects that become available to serve clients at-risk of or experiencing homelessness are communicated to the CoC so that HMIS data entry can be encouraged and / or required for the new project.

Below are things to do to ensure HMIS Bed Coverage reaches or maintains at 100%:

- Review the HIC on a quarterly or semi-annual basis to ensure all projects (with the exception of Victim Services Providers) are entering data into HMIS;
- If projects are included on the most recent HIC that do not enter data into HMIS, the CoC and HMIS Lead should find out why this is the case and target any solutions to the specific "why";
- For any new project that becomes available within the CoC that will serve clients at-risk of or experiencing homelessness, the CoC should be made aware and work with the HMIS Lead to ensure the new project is encouraged and / or required to enter data into HMIS

### *Data Quality Monitoring Visit Report and Improvement Plan*

This section should include the Data Quality Monitoring Visit Report and Improvement Plan and when and why it will be used. Define what measures will be used to determine whether an entity needs to be put on an Improvement Plan. List the steps included in the Improvement Plan, as well as the entities involved in monitoring, encouraging, and enforcing the plan. Mention any consequences to an entity that does not follow through with the Improvement Plan.

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### **Example:**

The Data Quality Monitoring Visit Report will be used annually during agency monitoring to ensure that all HMIS participating agencies are in compliance with HMIS policies and procedures, agency agreements, user agreements, and any other documents governing the use of HMIS. If deficiencies are identified in any area during the monitoring visit, the Improvement Plan will be used to assist the agency in addressing issues using concrete, time-bound action steps.

If, at any time, the HMIS Lead has documented one or more ongoing issues related to data quality with a given agency (ongoing is defined as the issue lasting longer than a specific period of time as defined by the CoC and HMIS Lead consecutively without resolution), an Improvement Plan will be implemented with the agency, with or without an accompanying monitoring visit.

*See Attachment for Data Quality Monitoring Visit Report and Improvement Plan.*

### **Appendix**

This section should address the provider and system setup data quality that is the responsibility of the HMIS Lead. Expectations and reasons why this is important should be addressed.

HMIS Lead / back end data quality

- Naming Conventions
- Project Descriptor Data Elements
- Visibility

Document processes

### **Example:**

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.

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.

#### *Naming Conventions*

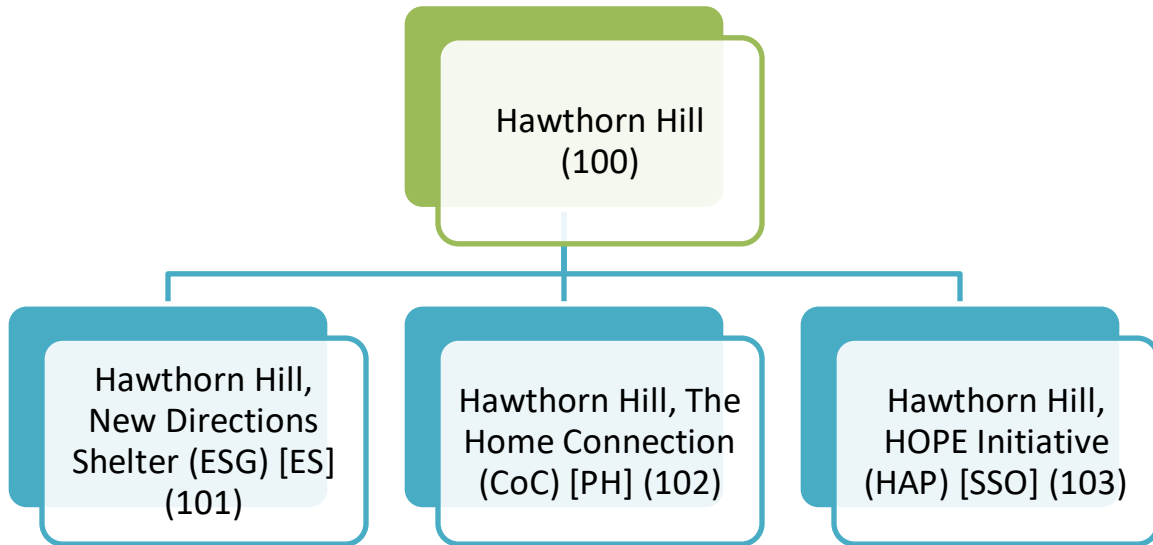
Projects in HMIS should have a consistent naming convention that includes, at a minimum, the Provider Name, Project Type, and Provider ID / Number. It may benefit the HMIS Lead to also include grant types (CoC, ESG, SSVF, RHY, etc.) in the overall naming convention of projects to easily locate projects funded with specific funding streams.

If the HMIS supports different “levels” for projects, the HMIS Lead ensures that the “levels” are consistent across the system. For example, if the HMIS supports a “provider tree”, the HMIS Lead ensures that the



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provider at the top of the “provider tree” is the Provider Name and that any projects operated by that provider are under that specific “provider tree” in the HMIS (example below).



The HMIS Lead will document the Naming Convention used and create a “provider tree” that mimics what is in HMIS for easy reference.

### *Project Descriptor Data Elements (PDDEs)*

The Project Descriptor Data Elements (PDDEs) are the “back end” data elements required to be completed by the HMIS Lead to ensure projects in the system are typified correctly.

- Project type is defined to ensure projects are pulled correctly into reports;
- Bed and unit inventory is up-to-date and is available for the Point in Time (PIT) and Longitudinal System Analysis (LSA) reports;
- Specific workflow is defined by project type;
- Specific grants and / or federal partner funding sources are identified;
- Target populations are listed;
- The CoC(s) in which the provider operates is identified

The HMIS Lead will document how this is done in the system, how often they review and update the PDDEs, and any changes that have been made over time to the process.

### *Visibility*

Ensuring the visibility in HMIS is set up correctly so that users can see what they are supposed to see and, alternatively, not see what they are not supposed to see, is critical. Visibility processes are different for every HMIS, and it is imperative that the HMIS Lead have a solid understanding on the visibility setup in the given system and how visibility is affected by project and user setup.

The HMIS Lead will document how the visibility is set up in the system and any changes made to it over time.