

Section 3- Data Quality Plan

Introduction to Data Quality

Data quality refers to the extent that data recorded in HMIS accurately reflects the same information in the real world. To meet the HMIS goal of reporting on the extent and nature of homelessness, it is critical that HMIS has the best possible representation of reality as it relates to homeless people and the programs that serve them. Specifically, it should be our goal to record the most accurate, consistent and timely information to draw reasonable conclusions about the extent of homelessness and the impact of homeless services. To best ensure we are achieving good data quality, all data entry must be captured using a HMIS Staff approved workflow.

Data elements included in this Data Quality Plan are determined by the US Department of Housing and Urban Development (HUD), all Federal Partners, and the DuPage Continuum of Care. This plan is written to comply with the most recent version of the HMIS Data Standards Manual and Data Dictionary¹. The HMIS Data Standards Manual and Data Dictionary describe what information must be collected, for which projects, persons and at which point in time. This section is not intended to replace the details of that document but to establish local thresholds for data quality errors based on program and funding type.

The Data Quality Plan applies to all participating HMIS projects regardless of project type or funding source, but some data elements may only be required for specific project types as noted in the table below. Not all data elements will be included in this plan, and projects should be mindful to routinely review their program manuals² for further guidance.

Data Coverage

The concept of data coverage refers to the sample size and diversity of the agencies and programs who utilize the HMIS. If we want an accurate picture of our community, we must not overlook any agency or program providing services within the Continuum of Care. It is important to note that this includes HUD funded and non-HUD funded programs and agencies.

Bed Coverage Rate

DuPage Continuum of Care has set a threshold of 100% bed coverage rates for dedicated homeless lodging providers in HMIS, excluding any domestic violence provider. Domestic Violence providers' bed coverage data will be submitted to HMIS annually or more frequently as needed. The Bed Coverage Rate is calculated by project type,

$$= \frac{\text{\# dedicated homeless beds in DuPage CoC HMIS}}{\text{\# dedicated homeless beds in DuPage CoC HMIS}}$$

¹ <https://www.hudexchange.info/resource/3824/hmis-data-dictionary/>

² <https://www.hudexchange.info/programs/hmis/hmis-guides/#project-setup-and-data-collection-resources>

dedicated homeless beds in the DuPage CoC

Other

The HMIS Committee, along with the partnership of the Continuum of Care’s Leadership and Needs Assessment Committees, will continue to evaluate the data needs of the community and will address those needs as appropriate, including but not limited to the inclusion of new HMIS participating agencies, the inclusion of new data elements, and the furthering of current data analysis.

Data Quality

Data Quality is broken down into 5 equally important components: Completeness, Timeliness, Accuracy, Training and Consistency. Each of these components must be individually monitored by those completing the data entry, Agency Data Administrators, and System Administrators.

Completeness

- HMIS Staff are to ensure that the Project Descriptor Data Elements are complete for all homeless system³ and prevention⁴ projects and that the data is reviewed annually for each project with each Agency Data Administrator.
- Each HMIS participating agency, project, Agency Data Administrator and user entering data into HMIS must ensure that Client Records have complete data elements that accurately reflect the client situation at that point in time, achieving an Error Rate⁵ less than the amount as specified in the Data Quality Error Rate Thresholds Table

Data Quality Error Rate Thresholds

| Element Type | Data Element | Project Type | Client | Collection Point | Error Rate Threshold | Tools to Measure |
|------------------------|---|--------------|--------|------------------|----------------------|--|
| Universal Data Element | Name and Name Data Quality | All | All | Record Creation | 5% | <ul style="list-style-type: none"> – Data Quality Framework – APR – ESG CAPER |
| Universal Data Element | Social Security Number (SSN) and SSN Data Quality | All | All | Record Creation | 10% | <ul style="list-style-type: none"> – Data Quality Framework – APR – ESG CAPER |

³ Homeless System Project must meet the following:

- a. The primary intent of the project is to serve homeless persons
- b. The project verifies homeless status as part of its eligibility determination
- c. The actual project clients are predominantly homeless (or, for permanent housing, were homeless at entry).

Homelessness is to be defined by the Homeless Emergency Assistance and Rapid Transition to Housing (HEARTH), where at this time Category 3 is not approved by HUD.

⁴ Homelessness Prevention Project is a project that offers services and/or financial assistance necessary to prevent a person from moving into an emergency shelter or place not meant for human habitation.

⁵ Error Rate includes null, don’t know/refused, and incongruent data

| | | | | | | |
|--------------------------------|---|-----------------------|---------------------------|-----------------------|-----|--|
| Universal Data Element | Date of Birth and Date of Birth Data Quality | All | All | Record Creation | 5% | – Data Quality Framework – APR – ESG CAPER |
| Universal Data Element | Race | All | All | Record Creation | 5% | – Data Quality Framework – APR – ESG CAPER |
| Universal Data Element | Ethnicity | All | All | Record Creation | 5% | – Data Quality Framework – APR – ESG CAPER |
| Universal Data Element | Gender | All | All | Record Creation | 5% | – Data Quality Framework – APR – ESG CAPER |
| Universal Data Element | Veteran Status | All | All | Record Creation | 10% | – Data Quality Framework – APR – ESG CAPER |
| Universal Project Stay Element | Disabling Condition (Y/N) | All | All | Project Start | 10% | – Data Quality Framework – APR – ESG CAPER |
| Universal Project Stay Element | Project Start Date | All | All | Project Start | 10% | – Data Quality Framework – APR – ESG CAPER |
| Universal Project Stay Element | Destination at Exit | NBN ES and SO | All | Project Exit | 40% | – Data Quality Framework – APR – ESG CAPER |
| Universal Project Stay Element | Destination at Exit | All but NBN ES and SO | All | Project Exit | 10% | – Data Quality Framework – APR – ESG CAPER |
| Universal Project Stay Element | Relationship to Head of Household | All | All | Project Start | 10% | – Data Quality Framework – APR – ESG CAPER |
| Universal Project Stay Element | Client Location | All | Head of Household | Project Start, Update | 10% | – Data Quality Framework – APR – ESG CAPER |
| Universal Project Stay Element | Prior Living Situation | All | Head of Household, Adults | Project Start | 10% | – APR – ESG CAPER |
| Universal Project Stay Element | Prior Living Situation: Chronic Homeless Status | All | Head of Household, Adults | Project Start | 10% | – Data Quality Framework – APR – ESG CAPER |

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|-------------------------------|---|-----------------|---------------------------|-------------------------------------|-----|--|
| Program Specific Data Element | Income | All, but NBN ES | Head of Household, Adults | Project Start, Update, Annual, Exit | 10% | <ul style="list-style-type: none"> – Data Quality Framework – APR – ESG CAPER |
| Program Specific | Non-Cash Benefits | All, but NBN ES | Head of Household, Adults | Project Start, Update, Annual, Exit | 10% | <ul style="list-style-type: none"> – Data Quality Framework – APR – ESG CAPER |
| Program Specific | Health Insurance | All, but NBN ES | All | Project Start, Update, Annual, Exit | 10% | <ul style="list-style-type: none"> – APR – ESG CAPER |
| Program Specific | Disability | All | All | Project Start, Update, Exit | 10% | <ul style="list-style-type: none"> – APR – ESG CAPER |
| Program Specific | Domestic Violence | All | Head of Household, Adults | Project Start, Update | 10% | <ul style="list-style-type: none"> – APR – ESG CAPER |
| Program Specific | Current Living Situation and Engagement | NBN ES and SO | Head of Household, Adults | Occurrence Point | 10% | <ul style="list-style-type: none"> – ESG CAPER |
| Program Specific | Bed Nights | NBN ES | All | Occurrence Point | 10% | <ul style="list-style-type: none"> – ES-DQ-Services to Exit Trifecta – ESG CAPER |
| Program Specific | Percent of AMI | All | Head of Household, Adults | Project Start, Update, Annual, Exit | 10% | <ul style="list-style-type: none"> – Basic Demographic and EE Details – SSVF Export (for SSVF projects only) |

Timeliness

To ensure accuracy of our data at any given time, HMIS data entry is to be completed in less than 7 days of the client interaction. Timeliness standards apply to all projects and information collected and entered into HMIS, including but not limited to assessment data, project entries, annual reviews, project exits, and service transactions.

Our committee has determined timeliness thresholds for Entry and Annual reviews, as shown in the Timeliness Thresholds table below, with the goal of continued improvement over time. No project can retroactively improve this measure but can establish protocols to help ensure timely data entry going forward. Given our HMIS’s capabilities, we have determined that we are unable to provide an accurate measure of timeliness at Exit. We will continue to work with our Vendor to address this matter and will utilize quarterly point-in-time reporting and project specific reports to help ensure timely project exits.

Timeliness Thresholds

| Timeliness Measure | Description | Project Type | Threshold: 7+ Days | Tools to Measure |
|--------------------|---|------------------------|--------------------|--|
| Program Start | A Program Start Date will be created in less than 7 days of the first day of service (ES, TH, SSO), contact (SO), or eligibility determination (all PH). The Program Start Date will be equal to the first day of service (ES, TH, SSO), contact (SO), or eligibility determination (PH). | All | 25% | <ul style="list-style-type: none"> - Data Quality Framework - APR - ESG CAPER |
| Annual Review | Required for all clients in a project for 365 days or more. Annual Reviews must be completed within 30 days from the anniversary of the Head of Household's project start date. | All | 25% | <ul style="list-style-type: none"> - Data Quality Framework - APR - ESG CAPER |
| Program Exit | A Program Exit Date will be recorded in HMIS in less than 7 days of learning of the client's last service date or residence date. The Exit Date will be equal to the last day of service or residence. | All, but NBN ES and SO | Not Available | <p>NONE – Our system does not capture the date an Exit record is created, but rather when the Entry/Exit record is updated. This is not an accurate reflection of when an Exit is created, therefore we are unable to accurately measure the timeliness of this data element.</p> <p>We recommend agencies utilize current reporting to spot check for accurate service and bed utilization. Those reports include:</p> <ul style="list-style-type: none"> - Data Quality Framework - APR - ESG CAPER |
| Program Exit | A Program Exit Date will be recorded in HMIS in less than 7 days of learning of the client leaving the program, or when it has been 30 days since the last Shelter Stay (NBN) or Contact (SO). The Exit Date will be equal to the last day of shelter (NBN) or Contact (SO). | NBN ES, SO | Not Available | <p>NONE – Our system does not capture the date an Exit record is created, but rather when the Entry/Exit record is updated. This is not an accurate reflection of when an Exit is created, therefore we are unable to accurately measure the timeliness of this data element.</p> <p>We recommend agencies utilize current reporting to spot check for accurate service and bed utilization. Those reports include:</p> <ul style="list-style-type: none"> - ESG CAPER - Trifecta |

Accuracy

We cannot assume that all information given to us by clients is truthful or that all data is always entered correctly. Inaccurate data may be intentional or unintentional. In general, false or inaccurate information is worse than incomplete information, since with the latter, it is at least possible to acknowledge the gap. Thus, it should be emphasized to clients and staff that it is better to enter nothing (or preferably “Data not collected”) than to enter inaccurate information. Agencies are required to monitor their own accuracy using some of the following guidelines:

- If using paper assessments, ensure that all required data elements are included, matching all client options and wording. DuPage has made a Universal Intake form available online, www.dupageco.org/HMIS.
- Review data quality and program specific reports for inaccurate information (pregnant males, minor veterans, etc.)
- Ensure the client understands what is being asked of them, what their options are, and that staff do not stray from the intent of the question.
- Audit a random sample of client records
- Review answers to questions with clients at subsequent interactions, at minimum on an annual basis.
- Ensure accurate project start, annual review, and exit dates for all participants. (See Timeliness Threshold Table).

Annually, System Administrators will audit a random selection of client files during the HMIS site visit to assess for tools that align with the required data elements and whether this data is accurately captured at all required points in time (program Start, Annual and Exit). A list of client Id’s will be provided in advance of the visit to each agency.

Training

End User training is a major component to a data quality plan. The roles and responsibilities of training users is outlined in the following: Section 1 of this SOP, DuPage Continuum of Care and HMIS Memorandum of Understanding, HMIS Partnership Agreement, Agency Data Administrator Agreement, and the End User Agreement.

All users must complete a new user training prior to receiving access to the HMIS. Training may be provided through the System or Agency Data Administrator. New user training must review the Standard Operating Procedures and the Standard Workflow, in addition to any project specific information.

New users may take a self-guided online End User certification exam that covers topics from the new user training. Users must obtain a 75% or better to pass the test. While this exam is not a requirement for accessing the system, agencies are encouraged to have at least 50% of their users pass the certification test.

To stay current and maintain access to HMIS, all Users must complete an annual re-training provided by

System Administrators. Training topics will vary each year depending on the needs of the system.

Agency Data Administrators or an agency/program representative must attend all scheduled Agency Data Administrator trainings, and in turn relay this information to the agency users.

If, at any time, a user is not able to demonstrate proper use or knowledge of the system or has not completed the required training, they will lose access to the system.

Consistency

The ability to generate system-level reports is dependent upon a common definition of fields, question wording and data entry/workflow. It is up to each agency to ensure adherence to HMIS Staff approved workflows.

Monitoring Data Quality

Monitoring Data Quality is a shared responsibility between the participating agency, HMIS Staff and the HMIS Policy Committee. Each of the 5 elements of data quality (Completeness, Timeliness, Accuracy, Training and Consistency) is to be monitored.

Agency/Program data quality is to be monitored by the Agency Data Administrator on a monthly basis. Each agency may choose different reports to monitor their data quality.

Each Agency Data Administrator should work with the HMIS Staff to ensure they are running correct data quality reports. HMIS Staff may set up a schedule by which agencies are required to submit specific data quality reports to the HMIS Lead for review.

As a guideline, the HUD CoC APR is the recommended report for monitoring agency data quality. It touches on all areas of data quality and allows Agency Data Administrators an opportunity to simultaneously monitor project performance. The following reports should additionally be considered for monitoring data quality:

| Agency Reports | Annual Performance Report (APR)/ESG CAPER | Data Quality Framework | Point-In-Time and Housing Inventory Reports | Project specific reports | Frequency |
|---------------------------------|---|------------------------|---|--------------------------|------------------------------|
| Data Completeness | x | x | x | x | Monthly or more frequently |
| Incongruities | x | x | x | x | Monthly or more frequently |
| Timeliness of Data Entry | x | x | x | x | Monthly or more frequently |
| Project Performance | x | | x | x | Quarterly or more frequently |

System data quality & performance is to be monitored by the HMIS Lead on a monthly basis. This may be done by requesting agencies to submit specified data quality reports and/or monitoring data quality directly in the system. The HMIS Lead should report any concerns to the HMIS Policy Committee.

| System Reports | Annual Performance Report (APR) | Data Quality Framework | Duplicate Client | User Last Login | System Growth Reports | Point-In-Time and Housing Inventory Reports | System Performance Measures | Longitudinal System Analysis (LSA) | Other reports as needed | Frequency |
|---------------------------|--|-------------------------------|-------------------------|------------------------|------------------------------|--|------------------------------------|---|--------------------------------|----------------------------------|
| Data Quality | x | x | x | | | x | x | x | - | Quarterly or more frequently |
| System Utilization | | | | x | | | | | - | Monthly or more frequently |
| System Performance | | x | | | x | x | x | x | - | Semi-Annually or more frequently |