

Section 3: Data Quality Plan

Introduction to Data Quality

Data quality in the Homeless Management Information System (HMIS) is crucial for accurately representing the reality of homelessness and program and system performance. To achieve good data quality, data must be assessed using a client centered approach, all tools must align with HMIS Data Standards and our local Data Quality Plan, and all data entry is to be completed in a timely fashion using a HMIS Staff approved workflow.

The Data Quality Plan applies to all HMIS partners regardless of project type or funding source as described in the table below. HMIS Users should regularly review the HMIS Data Standards Manual and related program manuals ¹ for further guidance. Victim Service Providers (VSP) shall maintain a comparable database that meets all minimum Federal and local data collection and reporting requirements, where all project data for any VSP will be maintained in the CoC HMIS.

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. VSP point-in-time data will be submitted to HMIS annually, or more frequently as needed, from their HMIS comparable database.

The Bed Coverage Rate is calculated by project type,

= (# dedicated homeless beds in HMIS) *divided by* (# dedicated homeless beds in DuPage CoC)

Other

The Data & Performance Committee, along with the partnership of DuPage Continuum of Care's Leadership and related committees, will continue to assess community data needs, including the inclusion of new agencies and data elements.

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 and Agency Data Administrators are to ensure that the Project Descriptor Data Elements are

¹ <https://www.hudexchange.info/programs/hmis/hmis-guides/#project-setup-and-data-collection-resources>

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complete for all HMIS projects² and that the data is reviewed annually for each project.

Each 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 Rate³ less than the amount as specified in the Data Quality Error Rate Thresholds Table below.

Data Quality Error Rate Thresholds

Element Type	Data Element	For Whom	Collection Point	Project Type	Error Rate Threshold	Tools to Measure
Project Descriptor	Organization Information	All Projects	Creation and reviewed annually	All Projects	0%	– 0227 Project Descriptor Elements Data Quality
Project Descriptor	Project Information	All HMIS Projects	Creation and reviewed annually	All HMIS Projects	0%	– 0227 Project Descriptor Elements Data Quality – Housing Inventory Count
Project Descriptor	Continuum of Care Information	All HMIS Projects	Creation and reviewed annually	All HMIS Projects	0%	– 0227 Project Descriptor Elements Data Quality – Housing Inventory Count
Project Descriptor	Funding Sources	All HMIS Projects	Creation and reviewed annually	All HMIS Projects	0%	– 0227 Project Descriptor Elements Data Quality – Housing Inventory Count
Project Descriptor	Bed and Unit Information	All HMIS Projects	Creation and re-assessed quarterly	ES, SH, TH, RRH, PSH, and all PH.	0%	– 0227 Project Descriptor Elements Data Quality – Housing Inventory Count
Project Descriptor	HMIS Participation Status	All HMIS Projects	Creation and	All HMIS Projects	0%	– TBD

² HMIS Projects are projects that are dedicated to ending or preventing homelessness such as Street Outreach (SO), Emergency Shelter (SO), Transitional Housing (TH), Safe Haven (SH), all Permanent Housing (PH - RRH, PSH, Other), Supportive Services only (SSO), and Coordinated Entry (CE).

³ Error Rate includes null, client doesn't know, client refused/client prefers not to answer, data not assessed, and incongruent data.

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Element Type	Data Element	For Whom	Collection Point	Project Type	Error Rate Threshold	Tools to Measure
			reviewed annually			
Project Descriptor	CE Participation Status	All HMIS Projects	Creation and reviewed annually	All HMIS Projects	0%	– TBD
Universal Data Element	Name and Name Data Quality	All Clients	Record Creation	All HMIS Projects	5%	– Data Quality Framework – APR – ESG CAPER
Universal Data Element	⁴ Full or last 4 of the Social Security Number (SSN) and SSN Data Quality	All Clients	Record Creation	All HMIS Projects	10%	– Data Quality Framework – APR – ESG CAPER
Universal Data Element	Date of Birth and Date of Birth Data Quality	All Clients	Record Creation	All HMIS Projects	5%	– Data Quality Framework – APR – ESG CAPER
Universal Data Element	Race and Ethnicity	All Clients	Record Creation	All HMIS Projects	5%	– Data Quality Framework – APR – ESG CAPER
Universal Data Element	Gender	All Clients	Record Creation	All HMIS Projects	5%	– Data Quality Framework – APR – ESG CAPER
Universal Data Element	Veteran Status	All Adults	Record Creation	All HMIS Projects	10%	– Data Quality Framework – APR – ESG CAPER
Universal Project Stay Element	Disabling Condition (Y/N)	All Clients	Project Start	All HMIS Projects	10%	– Data Quality Framework – APR – ESG CAPER
Universal Project Stay Element	Project Start Date	All Clients	Project Start	All HMIS Projects	10%	– Data Quality Framework – APR – ESG CAPER
Universal Project Stay Element	Destination at Exit	All Clients	Project Exit	Emergency Shelter (ES) and Street Outreach (SO)	21%	– Data Quality Framework – APR – ESG CAPER
				All Other HMIS Projects	10%	

⁴ Agencies should check with their funder to determine if the full vs. last 4 of the SSN is a requirement for their program.

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Element Type	Data Element	For Whom	Collection Point	Project Type	Error Rate Threshold	Tools to Measure
Universal Project Stay Element	Relationship to Head of Household	All Clients	Project Start	All HMIS Projects	5%	<ul style="list-style-type: none"> – Data Quality Framework – APR – ESG CAPER
Universal Project Stay Element	Client Location	Head of Household	Project Start, Update	All HMIS Projects	5%	<ul style="list-style-type: none"> – Data Quality Framework – APR – ESG CAPER
Universal Project Stay Element	Prior Living Situation and related fields	Head of Household, Adults	Project Start	All HMIS Projects	10%	<ul style="list-style-type: none"> – Data Quality Framework – APR – ESG CAPER
Program Specific Data Element	Income	Head of Household, Adults	Project Start, Update, Exit	All HMIS Projects	10%	<ul style="list-style-type: none"> – Data Quality Framework – APR – ESG CAPER
Program Specific Data Element	Income	Head of Household, Adults	Annual	ES	49%	<ul style="list-style-type: none"> – Data Quality Framework – APR – ESG CAPER
				SO	90%	
				All Other HMIS Projects	20%	
Program Specific	Non-Cash Benefits	Head of Household, Adults	Project Start, Update, Annual, Exit	ES	49%	<ul style="list-style-type: none"> – Data Quality Framework – APR – ESG CAPER
				SO	90%	
				All HMIS Projects	10%	
Program Specific	Health Insurance	All Clients	Annual	ES	49%	<ul style="list-style-type: none"> – APR – ESG CAPER
				SO	90%	
				All Other HMIS Projects	20%	
Program Specific	Disability	All Clients	Project Start, Update, Exit	All HMIS Projects	10%	<ul style="list-style-type: none"> – APR – ESG CAPER
Program Specific	Domestic Violence	Head of Household, Adults	Project Start, Update	All HMIS Projects	10%	<ul style="list-style-type: none"> – APR – ESG CAPER
Program Specific	Current Living Situation	Head of Household, Adults	At occurrence	Coordinated Entry (CE) and SO	10%	<ul style="list-style-type: none"> – ESG CAPER
Program Specific	Engagement	Head of Household, Adults	At occurrence	SO	NA	<ul style="list-style-type: none"> – ESG CAPER
Program Specific	Coordinated Entry Assessment	Head of Household	At Occurrence	Coordinated Entry	NA	<ul style="list-style-type: none"> – TBD

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Element Type	Data Element	For Whom	Collection Point	Project Type	Error Rate Threshold	Tools to Measure
Program Specific	Coordinated Entry Event	Head of Household	At Occurrence	Coordinated Entry	NA	– TBD
Federal Partner Program Specific	Percent of AMI	Head of Household, Adults	Project Start, Update, Annual, Exit	All HMIS Projects	10%	– Basic Demographic and EE Details – SSVF Export (for SSVF projects only)
Federal Partner Program Specific	Moving On Assistance	Head of Household	At occurrence	PSH	NA	– TBD
Federal Partner Program Specific	Translation Assistance Needed	Head of Household	Project Start	All HMIS Projects	NA	– TBD
Federal Partner Program Specific	Housing Assessment at Exit	All Clients	Project Exit	HP	NA	– TBD
Federal Partner Program Specific	Connection with SOAR	Head of Household and Adults	Project Start, Update, Annual, and Exit	SSVF HP and RRH	NA	– TBD
Federal Partner Program Specific	Referral Source	Head of Household and Adults	Project Start	All RHY	NA	– 0263 RHY Data Completeness – Hashed HMIS CSV and RHYMIS
Federal Partner Program Specific	Sexual Orientation	Head of Households and Adults	Project Start	PSH and All RHY	NA	– 0263 RHY Data Completeness – Hashed HMIS CSV and RHYMIS
Federal Partner Program Specific	Last Grade Completed	Head of Household and Adults	Project Start and Exit	All VASH, SSVF, and RHY	NA	– 0263 RHY Data Completeness – Hashed HMIS CSV and RHYMIS
Federal Partner Program Specific	School Status	Head of Household and Adults	Project Start and Exit	All RHY	NA	– 0263 RHY Data Completeness – Hashed HMIS CSV and RHYMIS
Federal Partner Program Specific	Employment Status	Head of Household and Adults	Project Start and Exit	All VASH, SSVF, GPD	NA	– 0263 RHY Data Completeness – Hashed HMIS CSV and RHYMIS

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Element Type	Data Element	For Whom	Collection Point	Project Type	Error Rate Threshold	Tools to Measure
Federal Partner Program Specific	General Health	Head of Household and Adults	Project Start and Exit	All VASH and RHY	NA	<ul style="list-style-type: none"> – 0263 RHY Data Completeness – Hashed HMIS CSV and RHYMIS
Federal Partner Program Specific	Dental Health	Head of Household and Adults	Project Start and Exit	All RHY	NA	<ul style="list-style-type: none"> – 0263 RHY Data Completeness – Hashed HMIS CSV and RHYMIS
Federal Partner Program Specific	Mental Health Status	Head of Household and Adults	Project Start and Exit	All RHY	NA	<ul style="list-style-type: none"> – 0263 RHY Data Completeness – Hashed HMIS CSV and RHYMIS
Federal Partner Program Specific	Pregnancy Status	Head of Household and Adults	Project Start and Exit	All RHY	NA	<ul style="list-style-type: none"> – 0263 RHY Data Completeness – Hashed HMIS CSV and RHYMIS
Federal Partner Program Specific	Formerly a Ward of Child Welfare/Foster Care Agency	Head of Household and Adults	Project Start	All RHY	NA	<ul style="list-style-type: none"> – 0263 RHY Data Completeness – Hashed HMIS CSV and RHYMIS
Federal Partner Program Specific	Formerly a Ward of Juvenile Justice System	Head of Household and Adults	Project Start	All RHY	NA	<ul style="list-style-type: none"> – 0263 RHY Data Completeness – Hashed HMIS CSV and RHYMIS
Federal Partner Program Specific	Family Critical Issues	Head of Household and Adults	Project Start	All RHY	NA	<ul style="list-style-type: none"> – 0263 RHY Data Completeness – Hashed HMIS CSV and RHYMIS
Federal Partner Program Specific	RHY Service Connections	Head of Household and Adults	At Occurrence	All RHY	NA	<ul style="list-style-type: none"> – 0263 RHY Data Completeness – Hashed HMIS CSV and RHYMIS
Federal Partner Program Specific	Commercial Sexual Exploitation/Sex Trafficking	Head of Household and Adults	Project Exit	All RHY	NA	<ul style="list-style-type: none"> – 0263 RHY Data Completeness – Hashed HMIS CSV and RHYMIS
Federal Partner Program Specific	Labor Exploitation/Trafficking	Head of Household and Adults	Project Exit	All RHY	NA	<ul style="list-style-type: none"> – 0263 RHY Data Completeness – Hashed HMIS CSV and RHYMIS

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Element Type	Data Element	For Whom	Collection Point	Project Type	Error Rate Threshold	Tools to Measure
Federal Partner Program Specific	Project Completion Status	Head of Household and Adults	Project Exit	All RHY	NA	– 0263 RHY Data Completeness – Hashed HMIS CSV and RHYMIS
Federal Partner Program Specific	Counseling	Head of Household and Adults	Project Exit	All RHY	NA	– 0263 RHY Data Completeness – Hashed HMIS CSV and RHYMIS
Federal Partner Program Specific	Safe and Appropriate Exit	Head of Household and Adults	Project Exit	All RHY	NA	– 0263 RHY Data Completeness – Hashed HMIS CSV and RHYMIS
Federal Partner Program Specific	Aftercare Plans	Head of Household and Adults	Project Exit	All RHY	NA	– 0263 RHY Data Completeness – Hashed HMIS CSV and RHYMIS
Federal Partner Program Specific	Veteran’s Information	All Veterans	Project Start	All VA and VASH	NA	– SSVF Data Quality
Federal Partner Program Specific	Services Provided - SSVF	All clients receiving services	At Occurrence	All SSVF	NA	– SSVF Data Quality
Federal Partner Program Specific	Financial Assistance – SSVF	All clients receiving financial assistance	At Occurrence	All SSVF	NA	– SSVF Data Quality
Federal Partner Program Specific	VAMC Station Number	Head of Household	Project Start	All VA and VASH	NA	– SSVF Data Quality
Federal Partner Program Specific	HP Targeting Criteria	Head of Household	Project Start	SSVF HP	NA	– SSVF Data Quality
Federal Partner Program Specific	HUD VASH Voucher Tracking	Head of Household/Veteran	At Occurrence	VASH	NA	– TBD
Federal Partner Program Specific	HUD VASH Exit Information	Head of Household/Veteran	Project Exit	VASH	NA	– TBD

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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 less than 7 days from 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 HMIS Projects	25%	<ul style="list-style-type: none"> – Data Quality Framework – APR – ESG CAPER – Point-in Time/Housing Inventory Supplemental
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 HMIS Projects	25%	<ul style="list-style-type: none"> – Data Quality Framework – APR – ESG CAPER – Annual Review Dashboard Report
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 HMIS Projects, but SO and CE	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 – Point-in Time

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Timeliness Measure	Description	Project Type	Threshold: 7+ Days	Tools to Measure
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 Contact (tracked in Current Living Situation). The Exit Date will be equal to the last day a Contact was made.	SO, CE	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 – Point-in Time – By Name List

Accuracy

When collecting personal information, a client-centered approach should be used. Every client must be asked for their self-reported information. Staff observations should never be used to collect information regarding how a client identifies. Inaccurate data, whether intentional or unintentional, is generally worse than incomplete information as it allows for acknowledging gaps. Thus, it should be emphasized to clients and staff that it is better to enter nothing 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 a Universal Intake form available online, dupagehomeless.org/hmis/forms.
- Review data quality and program specific reports for inaccurate information (a negative age, single child enrollment, minor who is a veteran, etc.)
- Confirm that the client understands what is being asked of them, they know what their options are, and that staff do not stray from the intent of the question.
- Audit a random sample of client records.
- Thoroughly review information with the client at program start, update, annual, and exit, ensuring the information provided is current and complete.
- Verify that the project start, annual review, and exit dates are accurate and complete for all participants. (See Timeliness Threshold Table).

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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 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, HMIS software, and the data entry workflow, in addition to any project specific information. Users will be expected to demonstrate understanding and proper data entry workflow prior to obtaining access to the live site. Alternative training modules may be required depending on the user's role and access in the system.

To stay current and maintain access to HMIS, all Users must complete an annual training provided by System Administrators. Training topics will include privacy, security, data standards, and common issues and questions.

Agency Data Administrators or an agency/program representative shall participate in Agency Data Administrator trainings, and in turn relay this and all HMIS related 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 accurately generate system-level reports is dependent upon a common understanding of the data being captured, options being provided to the client, ensuring only the client responses are being entered, and all tools meeting minimum data collection requirements where data is not directly captured in HMIS. It is up to each agency to ensure adherence to HMIS Staff approved data entry workflows.

Monitoring Data Quality

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

Agency and Program data quality is to be monitored by the Agency Data Administrator monthly. 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.

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As a guideline, the HUD CoC APR is the recommended report for monitoring program 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

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System data quality & performance is to be monitored by the HMIS Lead monthly. 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 Data & Performance Committee.

System Reports	Annual Performance Report (APR)	Data Quality Framework	Duplicate Client	User Last Login	Point-In-Time and Housing Inventory Reports	System Performance Measures	Longitudinal System Analysis (LSA)	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	Semi-Annually or more frequently