
Arizona Balance of State Continuum of Care Data Quality Plan



Quality Data Assures Quality Decisions

Acknowledgements: Symmetric Solutions, Inc. prepared this document under the direction of the Arizona Department of Housing, using the *From Intake to Analysis: A Toolkit for Developing a Continuum of Care Data Quality Plan* prepared for HUD by Cloudburst Consulting Group, Inc.

Table of Contents

INTRODUCTION	2
Purpose	2
Background	2
Goals	2
Maintain data quality	2
Formalize monitoring plan	2
DATA QUALITY COMPONENTS AND POLICIES	3
1. Timeliness	3
Policy: Daily Timeframe	3
Policy: Monthly Timeframe	3
2. Completeness	3
Policy: Unique ID numbers	3
Policy: All Clients Served	3
Policy: Missing/Unknown data	4
Policy: Bed Count	4
Policy: Bed Utilization Rate	4
3. Accuracy	5
Policy: Inaccurate data	5
Policy: Data consistency	5
Policy: Aliases	5
Policy: Data Consistency Checks	5
DATA QUALITY MONITORING PLAN	6
Policy: Data Timeliness	6
Policy: Data Completeness	6
Policy: Data Accuracy	7
COMPLIANCE	7
Policy: Data Timeliness	7
Policy: Data Completeness	7
Policy: Data Accuracy	7
DATA QUALITY REPORTS	7
APPENDIX A: DATA REQUIREMENTS	8

Universal Data Elements	8
Program Specific Data Elements Standards	8
Required Screens in HMIS	8

Approved by the Arizona Balance of State Continuum of Care HMIS Advisory Committee on May 15, 2013. Revised per HUD 2014 Data Standards Manual December 15, 2014.

Revisions

Date	New Policy	Revised Policy/Form	Policy Section	Policy or Form Name
12/2014	Add UDEs	2014 HUD Data Standards	Appendix A	HUD Required
6/3/2015	Required data elements for PATH and Outreach Projects	Arizona Path Recording Building Protocols HUD TA 5/15/2015	Timeliness	HUD Required

Introduction

This document describes the Homeless Management Information System (HMIS) data quality plan for the Arizona Balance of State Continuum of Care (BOS COC). It was developed by the BOS HMIS Lead Agency Arizona Department of Housing (ADOH) in conjunction with the BOS HMIS Advisory Committee to identify roles and responsibilities and to set policies and protocols regarding data quality. This plan has been reviewed and approved by the BOS COC.

This Plan works in conjunction with BOS Policies and Procedures and the BOS Data Security plan documents. All documents will be reviewed and updated annually to include the latest HUD HMIS data standards and locally developed performance plans.

Purpose

This Plan is to ensure that ongoing data quality monitoring meets or exceeds the Department of Housing and Urban Development's (HUD) requirements. The BOS recognizes that readily available, accurate, timely and complete data facilitates the ability to plan and strategize statewide efforts to end homelessness.

Background

HMIS, a locally administered electronic data collection system, stores longitudinal person-level information about the men, women, and children who access homeless and other human services in a community. Because the BOS receives HUD Continuum of Care (COC) funding, it must implement and maintain an HMIS to capture standardized data about all persons accessing the homeless assistance system. Furthermore, elements of HUD's annual COC funding competition are directly related to a COC's progress in ending homelessness which is supported by data from the HMIS.

In 2004, HUD published in the Federal Register the HMIS Data and Technical Standards which define the requirements for data collection, privacy safeguards, and security controls for all local HMIS. In March 2010, HUD published changes in the HMIS Data Standards Revised Notice incorporating additional data collection requirements for the Homelessness Prevention and Rapid Re-Housing Program (HPRP) funded under the American Recovery and Reinvestment Act (ARRA). Final HMIS data standards were published by HUD in 2014 in the HMIS Data Standards Manual, Version 2.1 and the HMIS Data Standards: HMIS Data Dictionary.

Locally, the Arizona Balance of State HMIS (initially called the Rural Arizona Continuum of Care HMIS) launched in 2004 with software vendor Bowman Systems, Symmetric Solutions, Inc. as System Administrator providing technical support and training, and ADOH serving as the HMIS Lead Agency. In 2014, Community Information and Referral Services (www.211Arizona.org) took over as the System Administrator for the Balance of State HMIS.

Goals

Maintain data quality

Data quality refers to the reliability and validity of client-level data collected in the HMIS database and measures the extent to which the client data in the database reflects actual client information. Reliable data revolves around assessment characteristics such as timeliness, completeness and accuracy. This document sets policies to maintain data quality.

Formalize monitoring plan

Constant and consistent analysis and reporting of HMIS data at both the program and aggregate system levels assure a greater level of data reliability and validity. The monitoring plan outlines the set of procedures performed on a regular, on-going basis and includes the timeline and frequency to review data. It tracks and generates information necessary to identify areas for data quality improvement.

Data Quality Components and Policies

There are three necessary components to maintaining data quality: timeliness, completeness, and accuracy of data entry.

1. Timeliness

Entering data in a timely manner reduces human error and ensures community data accessibility.

Policy: Daily Timeframe

Each program type enters applicable data as soon as possible but within the prescribed timeframe:

Data Entry Timeframe

PROGRAM TYPE	DATA ELEMENT	TIMEFRAME ENTRY
Emergency Shelters:	Universal Data Elements, Housing Check-In/Check-Out	7 calendar days after the check-in/check-out time
Transitional and Permanent Supportive Housing Programs:	Universal Data Elements, Program: Check-In/Check-Out	7 calendar days
Rapid Re-Housing and Homelessness Prevention Programs:	Universal Data Elements, Program-Specific Data Elements	7 calendar days after enrollment/eligibility is established
Outreach Programs:	Limited data elements; non-identified client information or aliases are allowed while outreach staff develop client relationships and when client refuses to provide information. Programs are required to keep track of non-identified client and alias information and must not create a new record if one already exists	7 calendar days of the initial encounter. Upon engagement for services, the client record must be amended with individually identifiable information, all remaining Universal Data Elements, and all Program Specific Data Elements and be entered within 7 calendar days of client engagement.

Policy: Monthly Timeframe

Each Agency Administrator must review all data for the month by the fourth working day of the following month. Example: All data for the month of January is complete and accurate by February fourth.

2. Completeness

All data entered into the HMIS shall be complete with a goal to collect 100% of all data elements; however, the BOS recognizes that this may not be possible in all cases. Therefore, the BOS established an acceptable range of null/missing and unknown/don't know/refused responses, depending on the data element and the type of program entering data.

Policy: Unique ID numbers

All clients receive a unique HMIS ID number which is automatically generated by the HMIS.

Policy: All Clients Served

All HMIS programs enter data on one hundred percent (100%) of their served clients except for those clients who refuse to have their data entered into HMIS.

Policy: Missing/Unknown data

Must be less than 5% per month in HUD required variable fields.

Acceptable Missing or Unknown Response Range by Program Type

Data Element	TH, PSH, RRH, HP		ESG, Non-HUD SSO		OUTREACH-date of enrollment	
	Missing	Unknown	Missing	Unknown	Missing	Unknown
First & Last Name	0%	0%	0%	0%	0%	0%
SSN	0%	0%	0%	5%	0%	5%
Date of birth	0%	0%	0%	2%	0%	2%
Race	0%	5%	0%	5%	0%	5%
Ethnicity	0%	5%	0%	5%	0%	5%
Gender	0%	0%	0%	0%	0%	0%
Veteran Status (Adults)	0%	5%	0%	5%	0%	5%
Disabling Condition (adults)	0%	0%	0%	5%	0%	5%
Residence Prior to Entry	0%	0%	0%	0%	N/A	N/A
Housing Status (Entry)	0%	0%	0%	0%	N/A	N/A
Housing Status (Exit)	0%	5%	0%	30%	N/A	N/A
Income & Benefits (Entry)	0%	0%	N/A	N/A	N/A	N/A
Income & Benefits (Exit)	0%	5%	N/A	N/A	N/A	N/A
Add'l PDES (Adults, Entry)	0%	5%	N/A	N/A	N/A	N/A
Destination (Exit)	0%	5%	0%	30%	N/A	N/A

Policy: Bed Count

Agency Administrators periodically update bed and unit counts in the HMIS database to ensure accuracy.

Data Entry Timeframe for Bed Counts

PROGRAM TYPE	TIMEFRAME ENTRY
Emergency shelters	monthly, within 4 days of the month's end
Scattered-site programs (TH or PH)	quarterly, within 4 days of the month's end
Project-based program	annually, within 4 days of the contract end date

Policy: Bed Utilization Rate

Upon exiting a program, the End-User exits the client from the bed or unit in the HMIS. The acceptable range of bed/unit utilization rates for established projects is:

**Bed Utilization Rate
(Calculated Beds available/Beds used)**

PROGRAM TYPE	PERCENTAGE UTILIZED
Emergency shelters	75-105%
Transitional Housing	80-105%
Permanent Supportive Housing	85%-105%

Exception: Since new projects may require time to reach the projected occupancy numbers, the bed utilization rate requirement will be relaxed during the first operating year.

3. Accuracy

Accurate data provides a view of homelessness and the services provided by a community within the BOS. Imprecise or false data creates an inaccurate picture of homelessness within a community and may either create or diminish gaps in services. Every agency must understand and emphasize to clients and staff the importance of accurate information.

Periodic updates and error correction must be completed on a monthly basis. HMIS data must accurately reflect the client data and services provided within the agency's client file. For example, the HMIS "Shelter Exit Date" must be the actual date the client physically exited the shelter.

Policy: Inaccurate data

BOS COC strictly prohibits recording inaccurate information. In the case of a client who refuses to provide correct personal information, enter "client refused."

Policy: Data consistency

End-Users collect and enter data in a common and consistent manner across all programs and agencies. All end-users will receive initial training by Community Information and Referral before accessing the live HMIS system. This ensures the data is understood, collected, and entered in an organized manner. Periodic advanced training and refresher courses also help to maintain the standard.

Policy: Aliases

When a client refuses to provide his/her or dependant's personal information and the program funder does not prohibit it, the End-user may enter client data under an alias using the following:

- Create the client record, including any family members, under an **assumed** first & last name
- Set the date of birth to 1/1/XXXX, where XXXX is the actual year of birth
- Answer any other identifiable elements as "client refused"
- Make a notation of the alias in paper client file and include the corresponding HMIS Client ID

An alias may not be added if a client's record already exists in HMIS database.

Note: Entering Alias client records may affect the Agency's overall data completeness and accuracy rates; also the Agency holds responsibility for any duplication of services that may result from hiding the actual name under an alias.

Policy: Data Consistency Checks

Agency Administrators will check accuracy and consistency of data by running quarterly program pre-enrollment, co-enrollment, or post-enrollment data analysis to ensure that the data "flows" in a consistent and accurate manner. For example, the following instances will be flagged and reported as errors:

- Mismatch between exit/entry data in subsequent enrollment cases
- Co-enrollment or overlapping enrollment in the same program type
- Conflicting assessments
- Household composition errors

Exception: With the approval of the HMIS Lead Agency, the System Administrator may serve as Agency Administrator for agencies with limited staff.

Data Quality Monitoring Plan

ADOH, the HMIS lead agency, works with the System Administrator to set a schedule to annually monitor each participating agency to ensure data quality. Roles and responsibilities of monitoring for each policy are outlined in this section.

Policy: Data Timeliness

The Agency Administrator:

- Runs and reviews custom timeliness reports in ART and Report Writer including all participating programs of different types.
- Emails the summary report and any related client detail reports to the System Administrator during the first week of the following month.
- Improves Agency's data timeliness or provides explanation before the next month's report.

The System Administrator:

- Reviews the report and assists the agency regarding any issues.
- Reports persistent issues to ADOH for advisement.

Policy: Data Completeness

The Agency Administrator:

- Runs and reviews reports such as the APR, Universal Data Quality, or custom ART or Report Writer reports.
- Compares any missing rates to the data completeness benchmarks (Acceptable Missing or Unknown Response Range chart, page 4).
- Emails the summary report and any related client detail reports to the System Administrator during the first week of the following month.
- Improves their data completeness rate or provides explanation before the next month's report.

The System Administrator:

- Reviews the report and assists the agency regarding any issues.
- Reports persistent issues to ADOH for advisement.

Agency Administrator Tasks	If annual number of households served < 200	If annual number of households served > 200
Run Open Cases Report Exit cases that should be closed. Enter cases that should be open.	Monthly	Weekly
Run Missing Data Report Correct missing data to be within thresholds. (See Page 4.)	Monthly	Weekly
Pull 10% of paper files and check against HMIS data to verify data accuracy.	Monthly	Monthly
If shelter, run Bed List Report Verify accuracy against paper shelter list.	Weekly	Weekly
If shelter, run Bed List Report Check Bed List to verify that number of open cases on HMIS report equals number of households on Bed List.	Monthly	Weekly
Issue QA report to program directors on status of QA check.	Monthly	Weekly

Policy: Data Accuracy

During the annual site visit, the System Administrator will request a percentage of client files or intake forms to compare to the information entered into the HMIS database. The review only includes parts of the client file which contain the HMIS required information and excludes any non-relevant, personal or agency specific information.

The Agency Administrator:

- Makes source documentation of client information available to System Administrator.
- Assists System Administrator during site visit.

The System Administrator:

- May, in advance, send a list of potential client IDs to be reviewed to the Agency Administrator.
- Visits the agency on site.
- Compares the source documentation with data entered in the HMIS database.
- Compiles a report of discrepancies and identifies with Agency Administrator potential work flow issues and possible advance End-user training needs.
- Emails the report (and Agency Solution Plan if necessary) to ADOH.

Exception: Outreach programs may be exempt from the Data Accuracy Review.

Note: Data quality monitoring may be performed outside of the regularly scheduled reviews if requested by program funders or other interested parties (the agency itself, HMIS Lead Agency, COC, HUD, or other Federal and local government agencies).

Compliance

Policy: Data Timeliness

The average timeliness rate in any given month should be within the allowed Timeframe. (See Data Entry Timeframe table, page 3)

Policy: Data Completeness

There should be no missing (null) data for required data elements. Responses that fall under unknown (“don’t know” or “refused”) should not exceed the allowed percentages in any given month. Housing providers shall stay within the allowed utilization rates.

Policy: Data Accuracy

The percentage of client files with inaccurate HMIS data shall not exceed 10%. For example, if the sampling includes 10 client files, then 9 out of 10 of these files must have the entire set of corresponding data entered correctly in HMIS.

Data Quality Reports

The System Administrator:

- Runs data quality-monitoring reports.
- Contacts Agency Administrator or End-user regarding data entry quality.
- Assists Agency Administrator in finding causes and recommends corrective measures.
- Notifies ADOH about non-compliance for required HMIS participation when the agency fails to make corrections and/or makes repeated or excessive data quality errors.

ADOH:

- Reviews HMIS data quality reports and certifies funding applications, including COC and ESG programs.
- May recommend that the COC deny funding due to low HMIS data quality scores.

APPENDIX A: DATA REQUIREMENTS

Universal Data Elements

- Name
- Social Security Number
- Date of Birth
- Race
- Ethnicity
- Gender
- Veteran Status
- Disabling Condition
- Residence Prior to Program Entry (Prior Living Situation)
- Program Entry Date
- Program Exit Date
- Destination
- Personal ID
- Household ID
- Relationship to Head of Household
- Client Location
- Length of Time on the Street (Extent of Homelessness)

Program Specific Data Elements Standards

- Housing Status
- Income and Sources
- Non-Cash Benefits
- Health Insurance
- Physical Disability
- Developmental Disability
- Chronic Health Condition
- HIV/AIDS
- Mental Health
- Substance Abuse
- Domestic Violence
- Contact
- Date of Engagement
- Services Provided
- Financial Assistance Provided
- Referrals Provided
- Residential Move-In Date
- Housing Assessment Disposition
- Housing Assessment at Exit

Required Screens in HMIS

- Client Tab General Information
 - Household
 - Finance
 - Veteran (if applicable)
 - Special Needs
 - Employment
- Client Visit Tab
 - Services

Programs (follow ups, etc.)
Assessment (Barriers to Housing Stability)
Progress