

Richmond Best Practices Conference

HCIS The Future: HUD Data Standards, AHAR, Data Quality Planning and Reporting

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Agenda

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- During this session we will:
 - Provide a brief history of HMIS
 - Review the HMIS Data and Technical Standards
 - Provide an overview of AHAR
 - Discuss Data Quality Planning
 - Discuss a few reporting changes

Homeless Management Information Systems

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- **What is HMIS?**

- a *locally administered* electronic data collection system that stores longitudinal person-level information about men, women, and children who access the homeless services system in a Continuum of Care (CoC).

2001 Congressional Directive

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- In 2001 Congress directed HUD on the need for data and analysis on the extent of homelessness and the effectiveness of the McKinney-Vento Act Programs including:
 - Developing unduplicated counts of clients served at the local level
 - Analyzing patterns of use of people entering and exiting the homeless assistance system
 - Evaluating the effectiveness of these systems

Why is HMIS Important?

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- Each Continuum of Care (CoC) must implement an HMIS; HUD assesses and scores progress in CoC application
- Local HMIS data is critical for the Annual Homeless Assessment Report (AHAR)
- Implementation of HMIS at the local level can support coordinated case management

Why is HMIS Important? (cont'd)

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- HMIS enables:
 - Collecting common set of data elements
 - Identifying who is literally homeless or at risk of homelessness
 - Tracking HPRP assistance provided
 - Reporting client progress and program performance
 - Monitoring on-going data quality

7 What are the HMIS Data and Technical Standards?

- Federal Register Notice that defines baseline requirements for:
 - Data collection (data elements and response categories)
 - Universal data elements (required for all programs)
 - Program-specific data elements (required for programs required to generate annual reports)
 - Privacy
 - Security
- Include HPRP data elements

Components of the HMIS Data Standards

- Five components:
 - Program Descriptor Data Elements
 - Universal Data Elements
 - Program-Specific Data Elements
 - Privacy Requirements
 - Security Requirements

Program Descriptors

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The Program Descriptor Data Elements are:

- 2.1 Organization Identifier
- 2.2 Organization Name
- 2.3 Program Identifier
- 2.4 Program Name
- 2.5 Direct Service Code
- 2.6 Site Information
- 2.7 Continuum of Care Number

Program Descriptors (cont'd)

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2.8 Program Type Code

2.9 Bed and Unit Inventory Information

2.10 Target Population A

2.11 Target Population B

2.12 Method for Tracking Residential Program
Occupancy

2.13 Grantee Identifier

Universal Data Elements

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- 3.1 Name
- 3.2 Social Security Number
- 3.3 Date of Birth
- 3.4 Race
- 3.5 Ethnicity
- 3.6 Gender
- 3.7 Veteran Status
- 3.8 Disabling Condition
- 3.9 Residence Prior to Program Entry

Universal Data Elements (Cont'd)

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3.10 Zip Code of Last Permanent Address

3.11 Housing Status

3.12 Program Entry Date

3.13 Program Exit Date

3.14 Personal Identification Number

3.15 Household Identification Number

Program-Specific Data Elements

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- 4.1 Income and Sources
- 4.2 Non-Cash Benefits
- 4.3 Physical Disability
- 4.4 Developmental Disability
- 4.5 Chronic Health Condition
- 4.6 HIV/AIDS
- 4.7 Mental Health
- 4.8 Substance Abuse

Program-Specific Data Elements (cont'd)

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4.9 Domestic Violence

4.10 Destination

4.11 Date of Contact

4.12 Date of Engagement

4.13 Financial Assistance Provided

4.14 Housing Relocation & Stabilization Services
Provided

Privacy Requirements

Provisions to protect client privacy/ confidentiality

Two levels of Requirements

- Mandatory
- Additional (Optional)

Privacy Standards cover:

- Data Collection Limitations
- Data Quality
- Purpose and Use Limitations
- Openness

Security Requirements

Provisions to computer system to deny unauthorized access to person-level data

Two levels of Requirements

- Mandatory
- Additional (Optional)

Security Standards cover:

- System Security
- Software Application Security
- Hard Copy Security

Data Elements

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- Several data elements specifically for HPRP* grantees including:
 - Housing Status
 - Grantee Identifier
 - Income and Sources
 - Non-Cash Benefits
 - Financial Assistance Provided
 - Housing Relocation & Stabilization Services Provided

*other programs may use these elements

HPRP Data Elements

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■ 3.11 Housing Status

- Must be collected in HMIS at entry and exit
- Used to determine client eligibility for program

■ 4.1 Income and Sources

- Must be collected in HMIS at entry, exit and annually
- Needed to count income if received within past 30 days
- Used to determine client financial eligibility for program (assessed every 3 months for HPRP)

Data Elements

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■ 4.2 Non-Cash Benefits

- Must be collected in HMIS at entry, exit, and annually
- Needed to count income if received within past 30 days
- Used to determine client financial eligibility for program
- Needs to be recertified every 3 months for HPRP

Data Elements

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- 4.10 Destination
 - To document client outcomes
 - Collected at program exit

- 4.13 Financial Assistance Provided
 - To document the type and amount of financial assistance provided during program participation

Data Elements

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- 4.13 Financial Assistance Provided (con't)
 - Assistance is paid to a third party (e.g. landlord, utility co.) on behalf of client:
 - Rental assistance
 - Security deposits
 - Utility deposits
 - Utility payments
 - Moving cost assistance
 - Motel & hotel vouchers

Data Elements

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- 4.14 Housing Relocation & Stabilization Services Provided
 - To document the housing relocation and stabilization services provided during program participation
 - Case Management
 - Outreach and engagement
 - Housing search and placement
 - Legal services
 - Credit repair

Most Common Data Quality Issues

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3.10 Zip Code of Last Permanent Address

3.13 Program Exit Date

Baseline Security Requirements

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- All machines accessing the HMIS must have:
 - Authentication
 - Virus Protection with auto-update
 - Firewalls- individual workstation or network
 - Encryption- transmission
 - Public access controls
 - Location control
 - Backup and disaster recovery
 - System Monitoring
 - Secure Disposal

Privacy Standards Framework

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- Personal Protected Information (PPI)
 - Includes name, SSN, program entry/exit, zip code of last permanent address, system/program ID, and program type.
- Allow for reasonable, responsible data disclosures
- Derived from principles of fair information practices
- Borrowed from HIPAA- Health Insurance Portability and Accountability Act

Baseline Privacy Standards

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- **Must** comply with other federal, state, and local confidentiality law
- **Must** comply with limits to data collection (relevant, appropriate, lawful, specified in privacy notice)
- **Must** have written privacy policy- and post it on your web site
- **Must** post sign at intake or comparable location with general reasons for collection and reference to privacy policy
- May infer consent for uses in the posted sign and written privacy policy

Summary of HMIS Standards

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- HUD expects every HMIS (or comparable database) to meet the baseline requirements as defined in the HMIS Data and Technical Standards.
- For more information or to request HMIS technical assistance visit:
www.HMIS.info

HMIS Requirements and Data and Technical Standards

Questions?

HMIS Requirements and Data and Technical Standards

Group Activity:

- How do the new data elements affect data collection at your agency?
- Will you need to make any changes to your business processes to ensure that you are capturing data in accordance with the standards? If so, what changes will you make?
- Are the standards making data collection easier/harder?
- How will front line staff and case managers get educated on the change in data standards?

Section V: AHAR

Key Elements

- Interestingly AHAR stands for Already Here All Ready?
- Introduction to the AHAR
 - Who, what, when, where, why
 - Key AHAR Reporting Requirements
 - Standard data outputs
 - Common data quality issues
 - Data Collection and Submission Process
 - Tips and Tools for AHAR participation
 - Strategies for increasing bed coverage
 - Monitoring and improving data quality
 - Data Collection Tool – AHAR Exchange



Introduction to the AHAR

What is it?

- An annual report to Congress about the number and characteristics of people who use homeless residential services and their patterns of use.
- It can be found online at:

[http://www.hudhre.info/documents/3rdHomelessAssessmen Report.pdf](http://www.hudhre.info/documents/3rdHomelessAssessmen%20Report.pdf)

or

www.hmis.info

Introduction to the AHAR

Who reports to the AHAR?

- The current AHAR can cover an entire CoC or a jurisdiction within a CoC, including the residential programs located in those areas:
 - 102 AHAR Sample Sites: Community Development Block Grants (CDBG) jurisdictions, which can be large cities, cities with 50,000 or more people, urban counties, and non-entitlement (or rural) areas. Some CDBG jurisdictions coincide with the geographic boundaries of CoC (e.g., large cities).
 - Contributing Communities: CoCs that provide CoC-wide data.

Introduction to the AHAR

HUD emphasis on HMIS and AHAR participation:

Increasing emphasis on HMIS implementation and AHAR participation through CoC competitive process

AHAR participation status is a question in HUD's CoC funding application

AHAR is the primary source of data on the extent and nature of homelessness nationwide

HPRP and HEARTH Act require HMIS participation

Introduction to the AHAR

When are data reported to the AHAR?

	Reporting Period	Data Collection Period
2008 AHAR	October 2007 – September 2008	October – January 2009
2009 AHAR	October 2008 – September 2009	October – December 2009
2010 AHAR	October 2009 – September 2010	October – December 2010

2009 AHAR Schedule

Activity	Schedule
2009 AHAR Reporting Period Ends	September 30, 2009
AHAR Exchange: Webinar and Conference Call Training	September 14 – September 25, 2009
Submit Complete Draft of AHAR Data	November 15, 2009
Ongoing Review of AHAR Data by Research Team	Within 2 days of receipt
Submit Complete and Final AHAR Data	December 15, 2009
HUD Publishes 2009 AHAR Report	June 2010

Introduction to the AHAR

What data are reported to the AHAR?

1. HMIS data:

- Based on HUD's Universal Data Elements
- Limited to emergency shelters and transitional housing programs only

2. CoC Exhibit 1 data:

- Housing Inventory data
- Populations Chart
- Subpopulations Chart

AHAR Reporting Requirements: HMIS Data

HMIS data are reported in 4 program categories:

1. **ES-IND:** all persons served in emergency shelters for individuals
2. **ES-FAM:** all persons in families served in emergency shelters
3. **TH-IND:** all persons served in transitional housing for individuals
4. **TH-FAM:** all persons in families served in transitional housing
5. **SUMMARY:** mostly aggregates information from 4 reporting categories

AHAR Reporting Requirements (con't.)

■ HMIS Data:

- An unduplicated count of persons within 4 program categories.
- Persons should be reported in multiple program types if they were served accordingly. (AHAR Exchange is programmed to adjust for cross-over.)
- Only HMIS participating programs provide data. (AHAR Exchange has built-in adjustment factors to account for non-participation.)

AHAR Reporting Requirements: CoC Data

- CoC Exhibit 1 Data:
 - Accurate bed inventory information is critical – used to calculate adjustment factor, bed utilization rates, and understand possible biases in program participation.
 - At present, CoC Exhibit 1 is the only source of unsheltered counts, and the reliability of street counts can vary.
 - Until the program-specific data elements are incorporated, the subpopulation counts are an important source of information.

AHAR Reporting Requirements: New for 2009

AHAR

Changes to the 2009 AHAR:

- Supplemental report on veterans that relies on current reporting requirements (ES-IND, ES-FAM, TH-IND, and TH-FAM) but only applied to veterans
 - Excludes household members other than the veterans
 - AHAR Exchange will be modified accordingly to allow communities to report on veterans separately from all sheltered persons
 - Priority will be placed on completing the regular submission process before turning to the data on veterans

AHAR Reporting Data Quality

Three Key Data Quality Indicators:

1. **Bed Coverage:** the total number of beds in HMIS divided by the number of beds in the CoC
Communities must have at least 50% HMIS bed coverage in 1 or more reporting categories
2. **Bed Utilization:** the number of people served on a given night divided by the number of available beds the same night
HMIS participating agencies must be recording accurate entry and exit dates for all clients served during the reporting period
Looking for utilization rates between 65%-105%
3. **Data Completeness:** a low rate of missing data across all questions
HMIS participating agencies must be collecting the HUD required Universal Data Elements

Data Collection: Most Common HMIS Data Quality Issues

1. **Low provider coverage:** must extrapolate based on limited information.
2. **Missing exit dates:** produces an over-count of persons served and exceedingly high bed utilization rates.
3. **Missing entry dates:** produces an under-count of persons served and very low utilization rates.
4. **Missing data:** high percentage of missing data on certain questions (e.g., disability and veterans status).

Data Collection & Submission: AHAR Stages

The AHAR *reporting period* is a 12-month timeframe: (Oct. 2008 – Sep. 2009)

What does this mean? Anyone who accesses an emergency shelter or transitional housing program during this time period should be included in your AHAR data.

Data Collection & Submission: HMIS Implementation and Monitoring

What should participating communities be doing?

1. Increase the number of providers participating in HMIS to increase bed coverage rates.
2. Confirm bed inventory.
3. Develop and start implementing data quality review procedures (e.g., bed utilization rates).
4. Identify and fix data quality issues.
5. Develop and test queries for generating AHAR data.

Data Collection & Submission: Data Collection

Communities should continue to pursue HMIS implementation and monitoring activities, but from October to December, the priority shifts to data reporting.

What should communities be doing?

1. Obtain data from providers that participated in HMIS for entire reporting period.
2. Run queries to obtain information for AHAR reporting categories.
3. Work with AHAR Team to fix any errors or inaccurate information.
4. Review data with other knowledgeable people in your community to confirm accuracy of information.
5. Document procedures for future AHARs.

Data Collection & Submission: AHAR Exchange

AHAR Exchange is a web-based data collection tool for communities to report their data

Features of the AHAR Exchange:

- Embedded consistency checks and automated calculations

- The ability to leave notes for AHAR data collection team about data

- Data log that shows who made changes and when

- Unique user names and passwords

- Navigation tools

AHAR Exchange

- To access AHAR Exchange go to <http://ahar.hmis.info/>.
- This site is accessible through Internet Explorer (6+), Firefox (2+) and Chrome.
- Formal AHAR Exchange demonstrations and trainings will be held in September.

Other AHAR Exchange Features

- XML Upload
- Built-in data validation
- Send messages to AHAR Data Collection Team
- Site Status page to quickly illustrate at what point in the reporting process the site is in
- Additional reports for local/community use

Additional Features

- Application Security Features (in accordance with HUD guidelines)
 - Time out after 15 minutes of inactivity
 - Lockout after 3 successive failed logins
 - Change password every 45 days
- Data Stored in a Secure, Professional Hosting Environment
 - Redundant Hard drives
 - Nightly Backups
 - Intensive Physical Security, (e.g., 24/7 Surveillance)
- Section 508 Compliance (accessible to the visually impaired)

The Sandbox Feature

- A special feature of AHAR Exchange is the AHAR Exchange Sandbox.
- The Sandbox is a “dummy” AHAR site which was designed for public viewing and testing the AHAR data collection screens and for generating and testing upload files
- To access the Sandbox site go to sandbox.hmis.info/.
- Communities may use Sandbox year round to monitor AHAR data quality

AHAR Participation and Registration

- To participate in the 2009 AHAR, new communities will need to register online.
- Look for link to register on hmis.info, as well as on a listserv announcement from HUD.

AHAR Resources (continued)

- 2007 Annual Homeless Assessment Report
 - <http://www.hudhre.info/documents/3rdHomelessAssessmentReport.pdf>
- AHAR Data Quality: Tips and Strategies
 - <http://hmis.info/Resources/289/AHAR-Data-Quality-Training.aspx>
- AHAR Memo on Improving Missing Data Rates
 - <http://hmis.info/Resources/852/AHAR-Update-July-2007.aspx>
- HMIS Bed Utilization Tool
 - <http://www.hmis.info/Resources/1057/HMIS-Bed-Utilization-Tool-2008-2009.aspx>

AHAR

Questions?

Data Quality Strategies

Is your HMIS data reliable for CoC reporting?

Is your HMIS data reliable for CoC reporting?

- HMIS data must be accurate, complete and representative
 - Monitor missing data rates to confirm that data are complete
 - Try generating program or case manager level data quality reports that identify null and missing values of universal data elements. Find sample reports at www.hmis.info.
 - Monitor bed utilization rates at provider level to confirm data are accurate
 - Use the bed utilization tool to assess how well you are doing at entering client entry and exit information.
 - Increase HMIS coverage to make data representative of entire CoC
 - Continue to target non-participating providers and discuss creating strategies to either enter or upload data to the CoC's HMIS.

Monitoring Bed Utilization Rates

- Bed utilization rate is an indicator of the “usability” of data, that is, does the data in the HMIS represent the clients served in our CoC?
 - Low utilization rates → Indicates providers are not *entering all clients into HMIS* → Underestimating the utilization of homeless assistance programs
 - High utilization rates → Providers are not *exiting all clients from HMIS* → Overestimating the length of time consumers stay in residential programs
- Work with the HMIS staff to complete the Bed Utilization Tool available at www.HMIS.info

Bed Utilization Rates

Facility Name	Program Type	FAM Beds	IND Beds	# of Persons the night of 1/31	Bed Utilization Rate
Provider A	THFAM	90	0	80	89%
Provider B	ESIND	0	65	115	177%
Provider C	ESFAM	116	0	75	65%
Provider D	ESMIX	30	17	46	98%
Provider E	THIND	0	42	22	52%

- Note: utilization can be calculated from bed management records or using active clients (entry/exit dates) as a proxy.
- Handout: Bed Utilization Tool

Addressing Utilization Rate Issues

- Need local knowledge to determine if utilization rates are accurate.
- Share results with providers and have them confirm that utilization rates are accurate.
- Run utilization reports regularly to monitor progress.
- With 12 month tool, monitor monthly changes in utilization rate.

Most Common HMIS Data Quality Issues

- **Missing exit dates:** produces an over-count of persons served and exceedingly high bed utilization rates.
- **Missing entry dates** (i.e. not all clients entered in HMIS): produces an under-count of persons served and very low utilization rates.
- **Missing data:** high percentage of missing data on disability, veterans status, and zip code of last permanent address.
- **Low provider coverage:** must extrapolate based on limited information.

Data Completeness

- Data completeness
 - All the required HMIS data elements are collected for each client
- Collection requirements differ by client type
 - Some data elements are only required for adults or adults and unaccompanied youth
- Valid responses differ by data element
- Partial responses should not be considered complete

Universal Data Elements

Data Element	Universe	“Don’t Know”/ “Refused”
Name	All Clients	Not Valid
Social Security Number	All Clients	Valid
Date of Birth	All Clients	Not Valid
Ethnicity and Race	All Clients	Not Valid
Gender	All Clients	Not Valid
Veteran Status	Adults	Valid
Disabling Condition	Adults	Valid
Residence Prior to Program Entry	Adults and Unaccomp.	Valid
Zip Code of Last Permanent Address	Youth	Valid
Program Entry Date	All Clients	Not Valid
Program Exit Date	All Clients	Not Valid

Generating CoC Client Records Counts

- Most software generates a unique identifier based on combination of identifying data elements.
 - Same Name
 - Same SSN
 - Same Date of Birth
 - Same Gender
- Cannot always rely on software generated Unique Identifier

What constitutes duplicated client records?

- What if Name, DOB, SSN, Gender don't match, but are close?
 - 3 of 4 match
 - 2 of 4 match
 - 1 of 4 match
- Probabilities
 - Same name – low probability match
 - Same SSN – high probability match
 - Name & Gender – low probability match
 - Name & DOB – high probability match
- "Fuzzy" match
 - A near match algorithm

Addressing Duplicate Records

- Use “Carrot & Stick” approach to decrease number of duplicates
- Provide tools such as Swipe Cards to decrease likelihood of duplicates
- Define business rules for when and how you will merge duplicate records ...in a reporting database...in the “live” HMIS database
 - Who is responsible for finding matches? How often?
 - Who verifies that the match is valid?
 - Who needs to agree?
 - Who needs to be notified and how?
- Don’t reinvent the wheel- work with your Vendor or contact other HMIS administrators using similar software to share queries, algorithms, and lessons learned on de-duplicating data

Data Quality

Group Activity:

- How do you measure data quality at your agency?
- Do you have business processes in place to help ensure data quality?
- How often do you look at your data?
- Do the data entry folks understand the importance of data quality?
- What do you do with the monthly data quality reports?
- How do you ensure quality data at your agency?

Reporting

Changes

- HUD APR
- AHAR
- E-SNAPS
- Security/Privacy Changes

Questions?

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Thank you for your time!