



# Continuous Data Quality Improvement Process King County Continuum of Care

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# Data Quality Defined

Data quality is a term that refers to the reliability and validity of client-level data in HMIS. It is measured by the extent to which data in the system reflects actual information in the real world. With good data quality, a Continuum of Care can accurately tell the story of the individuals and families it serves.

## Overview of Data Quality Continuous Improvement Process

A continuous data quality improvement process facilitates the ability of the CoC to achieve statistically valid and reliable data. It sets expectations for both the community and end users for capturing reliable and valid data on persons accessing agency programs and services.

### Roles & Responsibilities

Bitfocus will provide the following services to assist agencies in correctly entering data into HMIS, and in addressing data quality issues:

- Provide end user trainings and workflow documents.
- Work with agency management to identify at least one agency employee as an HMIS agency lead.
- Produce data quality reports and information on how to correct any identified data quality issues.
- Provide technical assistance to agencies requesting assistance in identifying what steps need to be taken in order to correct data quality issues
- Provide other services as contracted with a CoC and/or agency.

Working with their agency lead, agencies will take primary responsibility for entering, verifying, and correcting data entry:

- Agency staff will measure completeness by running APRs and other reports, then distribute those reports to staff tasked with improving data quality and completeness
- It is the responsibility of Agency management to ensure staff tasked with correcting data quality issues do so in a timely manner.

# Data Quality Standards

There are three general types of programs, each with a set of data elements that are required for every adult client. All required elements, regardless of program type, must have 0% Null rates. Don't Know and Refused rates vary by program type.

## Timeline

Data quality reports should be run at least once per month throughout the year. In the weeks prior to submitting a report (e.g.: AHAR), data quality reports may need to be run on a daily basis.

## Data Completeness

The HUD data standards expect no null (missing) data for required data elements, and "Don't Know" or "Refused" responses should not exceed percentages listed below. We understand that these percentages represent an ideal state and we seek to work toward this level of data completeness for all programs.

NOTE: Programs serving those experiencing domestic violence will understandably have much higher data incompleteness rates for name, social security number and date of birth, and programs serving those who may not be documented residents of this county will likely have higher rates of data incompleteness for social security numbers. These programs should focus on other areas of data quality.

Data Element	Applies to:	Don't Know/Refused Should Not Exceed
First Name	All Clients	5%
Last Name	All Clients	5%
SSN	All Clients	5%
Date of Birth	All Clients	5%
Race	All Clients	5%
Ethnicity	All Clients	5%
Gender	All Clients	5%
Veteran Status	Adults Only	5%
Disabling Condition	All Clients	5%

Residence Prior to Program Entry	Adults & HoHH	5%
Zip Code of Last Permanent Address	All Clients	5%
Housing Status (at entry)	Adults & HoHH	5%
Income and Sources (at entry)	Adults & HoHH	5%
Income and Sources (at exit)	Leavers - Adults & HoHH	5%
Non-Cash Benefits (at entry)	Adults & HoHH	5%
Non-Cash Benefits (at exit)	Leavers - Adults & HoHH	5%
Physical Disability	All Clients	5%
Developmental Disability	All Clients	5%
Chronic Health Condition	All Clients	5%
HIV/AIDS	All Clients	5%
Mental Health	All Clients	5%
Substance Abuse	All Clients	5%
Domestic Violence	Adults & HoHH	5%
Destination	Leavers - Adults & HoHH	5%

## Data Timeliness

In order to ensure that system-wide data is as accurate as possible, data should be entered according to the following timeliness standards.

Program Type	Data Timeliness Standard: At Entry	Data Timeliness Standard: At Exit
Emergency Shelter	All Universal Data Elements entered within two business days of intake	<b>Night by Night:</b> All Universal Data Elements entered at or before 30 calendar days after last service date. Exit date backdated to last service <b>Entry/Exit:</b> All Universal Data Elements entered within two business days of exit
Transitional Housing	All Universal and Program-specific Data Elements	All Universal and Program-specific Data Elements

	entered within two business days of intake	entered within two business days of exit
Permanent Supportive Housing	All Universal and Program-specific Data Elements entered within two business days of intake	All Universal and Program-specific Data Elements entered within two business days of exit
HPRP	All Universal and Program-specific Data Elements entered within two business days of intake	All Universal and Program-specific Data Elements entered within two business days of exit
Services Only	All Universal and Program-specific Data Elements entered within two business days of intake	All Universal and Program-specific Data Elements entered within two business days of exit
Outreach	All Universal and Program-specific Data Elements entered within two business days of intake	All Universal Data Elements entered at or before 30 calendar days after last service date. Exit date backdated to last service
Day Centers	All Universal and Program-specific Data Elements entered within two business days of intake	All Universal Data Elements entered at or before 30 calendar days after last service date. Exit date backdated to last service

## Minimizing Data Quality Issues

How to minimize data quality issues:

- Enter client data as soon as possible. The more time that passes between collecting data and entering the data into HMIS, the greater the odds that there will be data quality issues.
  - Recommended Time Frames:
    - Transitional and Permanent Housing Programs: Enter all program entry/exit data within three (3) workdays.
    - Emergency Shelters and non-HUD: Enter check in/checkout within one (1) workday (for night-by-night shelters waiting for a 30 day gap in bed nights, this should be one (1) workday after the 30 day gap).
    - Outreach: Create client profile, if necessary, within three (3) workdays. Record outreach services within one (1) workday.

In addition, the King County HMIS Standard Operating Procedures require that direct entry agencies enter all information within two business days. Data integration agencies are required to upload all data elements weekly.

- Whenever possible, consider entering data during client visits so that clients may help identify potential inaccuracies.

- Review Data Quality using APR or other relevant reports at least once a month. Correct all null values as soon as possible.

## When to Correct Data Quality Issues

At a minimum, begin correcting data quality issues at least two (2) months before any reporting deadline.

In general, evaluate and correct data quality quarterly using the following schedule:

- First month of quarter: begin data quality review, focused on ensuring the correct number of clients are enrolled and there are no null values. Make corrections as needed. For example, ensure that no required information, such as veteran status, is missing.
- Second month of quarter: review data with relevant program managers and/or staff to verify accuracy of data compared other records. For example, ensure that veteran status data entered into Clarity is correct.
- Third month of quarter: assess agency workflow to identify process improvements that may help ensure high quality data is consistently entered into system.

## Correcting Data Quality Issues

The following reports can help identify the majority of data quality issues:

- [KCWA-101] Seattle-KC Program Outcomes Report
- [HUDX-120] Annual Performance Report [OCT2014]
- [DQXX-110] Duplicate Clients
- [DQXX-103] Monthly Staff Report
- [DQXX-102] Program Data Review
- [DQXX-105] Monthly Agency Utilization Report

# Data for Local Funding and Performance Measurement Data

Local funders pull a complete set of HMIS data on a monthly basis to meet a variety of data needs, including generating a rank order for competitive funding rounds, populating the All Home Systems Performance Dashboard, and other performance measurement initiatives. .

**Approximate date: 1st of the month**

Although no specific review guidelines are attached to this data download, King County, Bitfocus and agency staff may identify issues throughout the year that impact this dataset.

- Throughout the year:
  - Bitfocus: Conduct data quality reviews based on feedback from King County staff and from agencies, following up with agencies as needed.
  - Agencies: Follow up on data issues as identified by Bitfocus and/or King County staff.

<i>Unsheltered count</i>			<i>PIT/HIC SysPM</i>			<i>APR</i>			<i>AHAR</i>		
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Bitfocus: Conduct data quality reviews as needed											
Agencies: Follow up on data issues as needed											
Qtrly Quality Review			Qtrly Quality Review			Qtrly Quality Review			Qtrly Quality Review		
-----Monthly Data Pulls-----											

## Point In Time Count (PIT)

The Point-in-Time (PIT) count is a count of sheltered and unsheltered homeless persons on a single night in January. HUD requires that Continuums of Care conduct an annual count of homeless persons who are sheltered in emergency shelter, transitional housing, and Safe Havens on a single night.

**Approximate PIT date: January 27**

**Approximate due date: April 30**

Preparation and submission schedule:

- Three (3) Months before data is due to HUD:
  - Bitfocus: run report drafts, identify issues around utilization and/or missing data, notify agencies as needed.
  - Agencies: review data with relevant program managers and/or staff to verify accuracy of data compared other records.
- Two (2) Months before data is due to HUD:

- Bitfocus: submit data to ASR
- One (1) Month before data is due to HUD:
  - Bitfocus: Assist with data entry into HDX, address validation issues as needed.
- Two (2) weeks before data is due to HUD:
  - Bitfocus: Final data review with King County staff as needed.

## Housing Inventory Count (HIC)

The Housing Inventory Count (HIC) is a comprehensive inventory for all housing that is dedicated to serving homeless and formerly homeless individuals and families within a CoC. All year-round beds/units should be counted.

**Approximate due date: April 30**

Preparation and submission schedule:

- Four (4) Months before data is due to HUD:
  - Bitfocus: begin program setup review, focusing on inventory and project changes throughout the year. Make corrections as needed, update housing inventory.
  - Agencies: work with Bitfocus staff to address issues.
- One (1) month before data is due to HUD:
  - Bitfocus: enter data into HDX, address validation issues as needed.
- Two (2) weeks before data is due to HUD:
  - Bitfocus: Final data review with King County staff as needed.

<i>Unsheltered count</i>			<i>PIT/HIC SysPM</i>		<i>APR</i>				<i>AHAR</i>		
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Bitfocus: utilization & inventory review for PIT/HIC											
Agencies: HIC inventory validation											
	Agencies: PIT data verification										
	Bitfocus: review w/ KC & submit to ASR										
			Bitfocus: assist with HDX entry								
Qtrly Quality Review			Qtrly Quality Review		Qtrly Quality Review			Qtrly Quality Review			
-----Monthly Data Pulls-----											

# Annual Performance Review (APR) - Program

Recipients of HUD funding through the homeless grant competition are required to submit an Annual Performance Report (APR) electronically to HUD, via Sage every operating year (formerly e-snaps). The APR is required of projects funded with the following HUD grant programs: Supportive Housing, Shelter Plus Care, and Section 8 Moderate Rehabilitation.

**Approximate due date: Varies by program**

Preparation and submission schedule:

- Two (2) Months before data is due to HUD:
  - Agencies: begin data quality review, focused on ensuring the correct number of clients are enrolled and there are no null values. Make corrections as needed. For example, ensure that no required information, such as veteran status, is missing.
  - Bitfocus: provide assistance to agencies upon request.
- One (1) Month before data is due to HUD:
  - Agencies: review data with relevant program managers and/or staff to verify accuracy of data compared other records. For example, ensure that veteran status data entered into Clarity is correct.
  - Bitfocus: provide assistance to agencies upon request.
- Two (2) weeks before data is due to HUD:
  - Agencies: enter data into Sage.
  - Agencies: conduct internal review of data entered into Sage to verify accuracy.

<i>Unsheltered count</i>			<i>PIT/HIC SysPM</i>		<i>APR</i>			<i>AHAR</i>			
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Bitfocus: Timelines vary; assist agencies as needed											
Agencies: Timelines vary; follow up on data issues as needed											
Qtrly Quality Review			Qtrly Quality Review			Qtrly Quality Review			Qtrly Quality Review		
-----Monthly Data Pulls-----											

# Annual CoC Application to HUD

The Seattle King County Continuum of Care competes in an annual national competition for HUD Continuum of Care Program funds. System-wide APR data is required as part of that application, as is aggregate data for all projects receiving Continuum of Care funding.

**Approximate due date: TBD**

Preparation and submission schedule:

- Two (2) Months before application is due to HUD:
  - Bitfocus: begin system-wide data quality review. Notify agencies of issues as needed.
  - Agencies: begin data quality review, focused on ensuring the correct number of clients are enrolled and there are no null values. For example, ensure that no required information, such as veteran status, is missing. Make corrections as needed.
- One (1) Month before data is due to HUD:
  - Bitfocus: run report drafts, identify issues and/or discrepancies from previous year, notify agencies as needed.
  - Agencies: review data with relevant program managers and/or staff to verify accuracy of data compared other records. For example, ensure that veteran status data entered into Clarity is correct.
- Two (2) weeks before data is due to HUD:
  - Bitfocus: submit data to King County and address validation issues as needed.
  - Bitfocus: conduct final review with King County of data to be submitted.

NOTE: The timing and overall timeline for the HUD CoC Program competition is set by HUD. If less than 60 days is allowed for the competition, this timeline will be adjusted accordingly.

<i>Unsheltered count</i>			<i>PIT/HIC SysPM</i>			<i>APR</i>			<i>AHAR</i>		
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Bitfocus: TBD - per HUD deadline											
Agencies: TBD - per HUD deadline											
Qtrly Quality Review			Qtrly Quality Review			Qtrly Quality Review			Qtrly Quality Review		
-----Monthly Data Pulls-----											

# HMIS Annual Performance Review (APR) - CoC

Recipients of HUD funding through the homeless grant competition are required to submit an Annual Performance Report (APR) electronically to HUD, via Sage every operating year. The APR is required of projects funded through the Continuum of Care Program.

**Approximate due date: July 31**

Preparation and submission schedule:

- Two (2) Months before data is due to HUD:
  - Bitfocus: begin system-wide data quality review. Notify agencies of issues as needed.
  - Agencies: begin data quality review, focused on ensuring the correct number of clients are enrolled and there are no null values. For example, ensure that no required information, such as veteran status, is missing. Make corrections as needed.
- One (1) Month before data is due to HUD:
  - Bitfocus: run report drafts, identify issues and/or discrepancies from previous year, notify agencies as needed.
  - Agencies: review data with relevant program managers and/or staff to verify accuracy of data compared other records. For example, ensure that veteran status data entered into Clarity is correct.
- Two (2) weeks before data is due to HUD:
  - Bitfocus: enter data into Sage, address validation issues as needed.
  - Bitfocus: conduct review with King County of data entered into Sage to verify accuracy.

<i>Unsheltered count</i>			<i>PIT/HIC SysPM</i>		<i>APR</i>			<i>AHAR</i>			
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Bitfocus: APR data quality review						
					Agencies: review/correct for APR						
						Bitfocus: run draft reports					
						Bitfocus: enter data into Sage (KC review)					
Qtrly Quality Review			Qtrly Quality Review		Qtrly Quality Review			Qtrly Quality Review			
-----Monthly Data Pulls-----											

# System Performance Measures (SysPM)

HUD System Performance Measures are a tool used to measure the local homeless response as a coordinated system rather than individual programs and funding sources. HUD will use the system-level performance information as a competitive element in its annual CoC Program Competition and to gauge the state of the homeless response system nationally.

**Approximate due date: May 31st**

Preparation and submission schedule:

- Three (3) Months before data is due to HUD:
  - Bitfocus: begin system-wide data quality review. Notify agencies of issues as needed.
  - Agencies: begin data quality review, focused on ensuring the correct number of clients are enrolled and there are no null values. For example, ensure that no required information, such as veteran status, is missing. Make corrections as needed.
- Two (2) Months before data is due to HUD:
  - Bitfocus: run report drafts, identify issues and/or discrepancies from previous year, notify agencies as needed.
  - Agencies: review data with relevant program managers and/or staff to verify accuracy of data compared other records. For example, ensure that veteran status data entered into Clarity is correct.
- Two (2) weeks before data is due to HUD:
  - Bitfocus: enter data into HDX, address validation issues as needed.
  - Bitfocus: Final data review with King County staff as needed.

<i>Unsheltered count</i>		<i>PIT/HIC SysPM</i>		<i>APR</i>			<i>AHAR</i>				
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		Bitfocus: SysPM data quality review									
		Agencies: review/correct for SysPM									
				Bitfocus: enter & validate data in HDX (KC review)							
Qtrly Quality Review			Qtrly Quality Review			Qtrly Quality Review			Qtrly Quality Review		
-----Monthly Data Pulls-----											

# Annual Homeless Assessment Report (AHAR)

The AHAR, a HUD report to the U.S. Congress that provides nationwide estimates of homelessness, including information about the demographic characteristics of homeless persons, service use patterns, and the capacity to house homeless persons.

**Approximate draft due date: Oct 31**

**Approximate final due date: Dec 1**

Preparation and submission schedule:

- Quarterly throughout the year:
  - Bitfocus: Conduct data quality reviews one month after AHAR PIT dates and notify agencies of any issues.
  - 2016-2017 PIT dates:
    - Oct 26, 2016
    - Jan 25, 2017
    - Apr 26, 2017
    - Jul 26, 2017
- Two (2) Months before draft submission due date:
  - Bitfocus: begin program setup review, focusing on inventory and project changes throughout the year. Make corrections as needed, update housing inventory.
  - Agencies: begin data quality review, focused on ensuring the correct number of clients are enrolled and there are no null values. For example, ensure that no required information, such as veteran status, is missing. Make corrections as needed.
- One (1) Month before draft submission due date:
  - Bitfocus: run report drafts, identify issues and/or discrepancies from previous year, notify agencies as needed.
  - Agencies: review data with relevant program managers and/or staff to verify accuracy of data compared other records. For example, ensure that veteran status data entered into Clarity is correct.
- Two (2) weeks before draft submission due date:
  - Bitfocus: enter data into HDX, address validation issues as needed.
- Two (2) weeks before draft submission due date:
  - Bitfocus: Final data review with King County staff as needed.

**Unsheltered count**

**PIT/HIC SysPM**

**APR**

**AHAR**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
								Bitfocus: review programs and inventory; run draft AHAR.			
								Agencies: review/correct for AHAR			
									Bitfocus: run draft AHAR; KC review		
									Bitfocus: enter & validate in HDX	HUD review & validate	
<b>Qtrly Quality Review</b>			<b>Qtrly Quality Review</b>			<b>Qtrly Quality Review</b>			<b>Qtrly Quality Review</b>		
----- <b>Monthly Data Pulls</b> -----											

# Data Quality & Reporting Timeline

Unsheltered count			PIT/HIC		SysPM		APR			AHAR	
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Bitfocus: utilization & inventory review for PIT/HIC											
Agencies: HIC inventory validation											
	Agencies: PIT data verification										
	Bitfocus: review w/ KC & submit to ASR										
			Bitfocus: assist with HDX entry								
					Bitfocus: APR data quality review						
					Agencies: review/correct for APR						
						Bitfocus: run draft reports					
						Bitfocus: enter data into Sage (KC review)					
		Bitfocus: SysPM data quality review									
		Agencies: review/correct for SysPM									
				Bitfocus: enter & validate data in HDX (KC review)							
							Bitfocus: review programs and inventory; run draft AHAR.				
							Agencies: review/correct for AHAR				
							Bitfocus: run draft AHAR; KC review				
							Bitfocus: enter & validate in HDX		HUD review & validate		
Qtrly Quality Review			Qtrly Quality Review			Qtrly Quality Review			Qtrly Quality Review		
-----Monthly Data Pulls-----											