

# Data Quality Plan for the Orange County HMIS

Ensuring high-quality data in the Orange County Continuum of Care Homeless Management Information System (OC HMIS) is crucial for understanding the scope of homelessness in our community, understanding its performance, and determining the appropriate strategies and resources to address this problem.

The following Data Quality Plan lays the framework, establishes parameters and processes, and outlines individual responsibilities to improve data quality across projects within the OC HMIS. The Data Quality Improvement Plan includes several key concepts that determine the reliability and the comprehensiveness of our community's data.

The key components that are encompassed under the concept of data quality are data completeness, data coverage, utilization, data timeliness, data accuracy, and data consistency.

## Data Quality Components

### Data Completeness

Data Completeness refers to the degree to which all required data is known and documented. Coverage and utilization are both forms of completeness. Data completeness is crucial in ensuring that the recorded information in the OC HMIS accurately represents the population served in projects within the community. Missing data causes information gaps that are detrimental to accurate analysis of the data collected about Orange County's population experiencing homelessness. Additionally, missing information makes it difficult to deduplicate the number of clients served in the community, which distorts our understanding of the extent to which Orange County residents experience homelessness.

Data completeness is achieved when all the required data elements are answered for all the clients enrolled in projects within the system. For this purpose, Homeless Services Providers should review the *Data Completeness Reports (Appendix A)*, the *Data Quality Corrections Report (Appendix C)*, and the *Data Quality Report Cards Dashboard (Appendix E)* quarterly and should strive to complete missing information per this review as best as their ability.

There are two categories of data elements used in HMIS:

1. Universal Data Elements (UDE) - Required of all projects that participate in the OC HMIS.
2. Program Specific Data Elements (PSDE) - Requirements vary by project type and funding source.

The table below shows the current Data Completeness thresholds by project type for each type of data element collected in HMIS: Universal Data Elements, Program Specific Data Elements at Entry, and Program Specific Data Elements at Exit.

Project Type	UDE	PSDE Entry	PSDE Exit
<b>Coordinated Entry</b>	95%	N/A	N/A
<b>Emergency Shelter</b>	98%	96%	65%
<b>Homeless Prevention</b>	98%	96%	95%
<b>Permanent Supportive Housing/ Other Permanent Housing</b>	98%	96%	95%
<b>Rapid Re-Housing</b>	98%	96%	95%
<b>Services Only</b>	95%	90%	50%
<b>Street Outreach</b>	95%	90%	50%
<b>Transitional Housing</b>	98%	96%	95%

Table 1: Current Data Completeness Thresholds by Project Type

### Data Coverage

Data Coverage refers to the degree to which all Homeless Services Providers within the CoC's geographic coverage area enter all homeless clients' information into the OC HMIS. Providers include those funded by the CoC and ESG Program, federal partner agencies, foundations, and private organizations.

Data Coverage is essential for a community as it allows it to understand the complete scope of efforts that have been deployed to house Orange County's residents experiencing homelessness. It also allows the community to align efforts and work collectively towards the same goal of preventing and ending homelessness in Orange County. Partial participation of homeless services providers in HMIS negatively affects the ability of the CoC to evaluate how the community is performing as a whole towards the goal of ending homelessness.

Data Coverage is achieved when all Homeless Services Providers of the community, regardless of the funding source, do participate in the OC HMIS and enter all the information from clients served by the entirety of their projects into the system. In the OC Continuum of Care, coverage data is collected and reviewed during the Housing Inventory Count (HIC) that is submitted to HUD every year. The coverage information is also submitted as part of the CoC application.

The current goal that Orange County has for data coverage is 85%. In order to reach that rate, partially participating and non-participating providers should be encouraged by the Continuum of Care to start collecting their information into the OC HMIS by emphasizing the benefits that using the system has for the success of their projects' operations and achievements of their goals.

### Bed Utilization

Bed utilization refers to the degree to which the total number of homeless beds within the HMIS is recorded as occupied divided by the total number of homeless beds within the CoC's geographic coverage area. A bed utilization percentage between 50% and 105% is a good indicator of data quality as it is difficult to gauge the degree of quality in the system's information if the utilization rate is too low (below 50%) or too high (105%) without a reasonable explanation.

A proper utilization rate is important as it allows Orange County to optimize the usage of beds and units that are available for serving the homeless population. An optimal utilization rate can only be obtained when the number of beds recorded in HMIS is accurate, which requires providers to enter data into HMIS for every client they serve and exit these clients once they are no longer being served by their projects.

Bed and Unit Utilization is reviewed for all Homeless Services Providers' projects within the CoC geographic area annually in the Housing Inventory Count submission to HUD. Additionally, agencies can review their residential projects' utilization on the Project Performance Reports (PPR) that are published by 211OC twice a year for each project type. Moreover, utilization is reviewed as part of the CoC Application. Current thresholds by Project Type are specified in the table below.

Project Type	Utilization
<b>Emergency Shelter</b>	70%
<b>Permanent Supportive Housing</b>	95%
<b>Other Permanent Housing</b>	95%
<b>Transitional Housing</b>	80%

Table 2: Current Utilization Thresholds by Project Type

## Data Timeliness

Data Timeliness refers to the degree to which the data is collected in HMIS and available when it is needed. Timely data entry is indispensable for the good performance of the system as it ensures data recorded in HMIS is the most current information on the clients served by participating projects. Up-to-date information can only be achieved when the clients' data is entered in HMIS as soon as it is collected. Entering data in a timely manner can reduce human error when too much time has elapsed between data collection and data entry.

It is expected for users of the OC HMIS to record intake, exit, and services information in HMIS within **three calendar days** of the client's actual Project Start, Project Exit, or Service Provision date, respectively. For this purpose, agencies should review the *Data Timeliness Reports (Appendix B)* and the *Data Timeliness* section of the *Data Quality Report Cards Dashboard (Appendix E)* so they can identify how many days on average does it take to record this data in the system for all projects. A minimum of quarterly reviews of these materials would facilitate the determination of strategies for reaching the timeliness goal of three days maximum between data collection from clients served and the data's entry into HMIS.

## Data Accuracy

Data accuracy refers to the degree to which data entered in HMIS represents the real information about the clients that are served in the projects contributing data to the system and the services that are provided to clients. Data accuracy depends on the client's ability to provide correct information and the intake worker's ability to document and enter the data accurately. Data accuracy in HMIS is hard to assess and measure as there is no standardized baseline of clients' accurate information.

Given the uniqueness of each agency's operation, all providers should establish their own process for monitoring the data they contribute to the OC HMIS to verify that it reflects clients' information accurately. For this purpose, it is recommended to take into consideration the following steps:

- Establish a simple process for HMIS users to report and correct errors as they are discovered.
- Emphasize to clients and intake staff that it is preferable to enter "client doesn't know" or "data not collected" than to enter inaccurate information.
- Provide clients with access to review and correct the personal information that has been entered in HMIS.
- Ensure clients' first and last names are spelled correctly and that dates of birth are properly verified by cross checking this information on clients' identification documents when possible.

To support the specific data accuracy monitoring process that each agency establishes, Agency Administrators (AAs) should review the *Data Accuracy Dashboard (Appendix F)* in HMIS. Additionally, to assess accuracy in the system, AAs should review the data issues flagged in the *Data Quality Corrections Report (Appendix C)* and displayed in the *Data Completeness and Accuracy* section of the *Data Quality Report Cards Dashboard (Appendix E)*.

## Data Consistency

Data consistency refers to the degree to which the data is equivalent in the way it is collected and stored among all the Homeless Services Providers that participate in the OC HMIS. In order to have consistency in the data, all HMIS users across all agencies need to have the same understanding of what is the clients' information that should be collected, the interpretation of this information, and how it should be collected and entered in the HMIS.

Having consistency in the way the data is entered in the system is crucial as it directly affects the accuracy of the clients' information. Furthermore, different interpretations of how to ask data entry questions, or what answers to those questions mean, lead to aggregate information that cannot be correctly interpreted and presented.

In order to standardize and clarify the interpretation of the questions and response options associated with the data elements collected in HMIS, agencies should review the *Data Consistency Cheat Sheets (Appendix F)*. By studying these sheets, data entry staff will be able to have the same understanding of the information that each field is meant to collect. Additionally, HMIS users will know with certainty the impact that the responses to the data elements fields have on their projects' performance.

## Data Quality Monitoring and Reporting Process

In order to ensure a high level of data quality in OC HMIS, it is necessary to establish individual responsibilities for Participating Agencies as well as the HMIS Lead/System Administrators.

The following section outlines the steps and specific actions to review and improve data quality in the OC HMIS. This process should be completed every quarter.

### Step 1: 211OC sends Data Quality Corrections to Agency Administrators

- 211OC generates the *Data Quality Correction Report* for all active projects in the OC HMIS for the previous quarter.
- 211OC sends Agency Administrators the *Data Quality Correction Report* which flags Data Completeness and Accuracy errors across fields associated with the Universal Data Elements (UDE) for active enrollments during the previous quarter.

### Step 2: Agencies correct missing data/errors in HMIS

- Agencies complete missing information where possible and make appropriate corrections to the clients' enrollments in HMIS according to the DQ errors highlighted in the *Data Quality Correction Report*.
- Agencies review the *Data Quality Corrections Reference Guide* to see a description of the data quality errors highlighted in the report and see instructions on how to correct data issues.
- Victim Service Providers send 211OC Data Quality Exports of active enrollments in their projects during the previous quarter.

### Step 3: 211OC runs and publishes Data Quality Report Cards

- 211OC publishes the *Data Quality Report Cards Dashboard* which assesses Data Completeness, Accuracy, and Timeliness for active enrollments during the previous quarter in all the projects participating in the OC HMIS.
- The *Data Quality Report Cards Dashboard* includes the percentage of data errors and valid responses for each UDE by project, the Average Data Completeness Score for each project, and the average number of days it takes agencies to record intake, exit, and services information in HMIS for each project.

In preparation for the data quality monitoring and reporting process, Agency Administrators should utilize the additional reports and tools that 211OC has made available to review the data quality in their projects. These reports and tools are explained further in the appendices of this document and are outlined in the *OC HMIS Data Quality Tools* document.

## Quarterly Due Dates

The following table specifies the timeframe for each step in the Data Quality Monitoring and Reporting Process.

Quarters	Step 1 211OC Sends DQ Corrections to Agency Administrators	Step 2 Agencies correct DQ errors and missing information in HMIS	Step 3 211OC publishes Data Quality Report Cards
Q1: 1/1 – 3/31	April 5 <sup>th</sup>	April 18 <sup>th</sup>	April 30 <sup>th</sup>
Q2: 4/1/ – 6/30	July 5 <sup>th</sup>	July 18 <sup>th</sup>	July 30 <sup>th</sup>
Q3: 7/1/ – 9/30	October 5 <sup>th</sup>	October 18 <sup>th</sup>	October 30 <sup>th</sup>
Q4: 10/1 – 12/31	January 5 <sup>th</sup>	January 18 <sup>th</sup>	January 30 <sup>th</sup>

Table 3: Generic Quarterly Due Dates

The date will be changed to the first business day after dates that fall on a holiday or weekend

## Incentives and Enforcements

This section describes the actions that the Orange County CoC will take in order to incentivize agencies to have high data quality, and the interventions needed to assist projects that have not been able to meet the data quality thresholds. The implementation of incentives and enforcements will allow the HMIS Lead to prioritize the projects that need to be assisted with additional technical support.

### Incentives

- Agencies with projects that met data quality thresholds for all four quarters in the calendar year will be shared with the CoC Board
- Agencies with projects that met data quality thresholds for all four quarters in the calendar year will be published on the ochmis.org website

### Enforcements:

- Projects with at least four data elements under 80% in any quarter will receive technical support from 211OC.
- Projects targeted for technical support in 4 consecutive quarters will be shared with the CoC Board.
- If an agency applies for funding approved by the CoC Board and has projects targeted for technical support in at least 4 consecutive quarters, the agency will be required to address data quality issues in their application.
- Projects targeted for technical support in 4 consecutive quarters that are not receiving funding that requires HMIS participation will be reviewed by the Agency Access Working Group to determine the appropriateness of the project's continued HMIS participation. Projects removed from HMIS may re-apply for access after three months.

## Appendices

### Appendix A: Data Completeness Reports

Completeness reports assess the degree to which all required data elements are answered in HMIS for all the clients to whom these data elements apply. It is recommended for Homeless Services Providers to run and review Completeness Reports quarterly in order to identify incomplete or missing information. The following reports are located in the Reports Page of HMIS, under the Data Analysis tab, Data Quality section.

- **Universal Data Elements (UDE) Completeness Report:**  
This report shows the client responses to the UDE defined by HUD in the [HMIS Data Standards](#). These data elements are required to be collected by all projects participating in the OC HMIS, regardless of funding source.
- **Common Program Specific Data Elements (PSDE) Reports:**
  - **PSDE at Entry Completeness Report:**  
This report shows the client responses to the Common PSDE at Project Entry defined by HUD in the [HMIS Data Standards](#). These data elements are collected across most HMIS Federal Partner programs at the start of the clients' enrollments.
  - **PSDE at Exit Completeness Report:**  
This report shows the client responses to the Common PSDE at Project Exit defined by HUD in the [HMIS Data Standards](#). These data elements are collected across most HMIS Federal Partner programs at the end of the clients' enrollments.
- **Federal Partner Program Specific Data Elements:**  
The following reports show the client responses to the data elements developed by each Federal Partner defined by HUD in [the HMIS Federal Partner Programs Manual](#). These data elements can be limited to one or two federal partner programs or a single component of one of the Federal Partner programs.
  - **HOPWA Specific Data Elements:**  
This report shows the client responses to the Federal Program Specific Data Elements that need to be collected by HOPWA funded projects as defined in the [HOPWA Program HMIS Manual](#).
  - **PATH Specific Data Elements**  
This report shows the client responses to the Federal Program Specific Data Elements that need to be collected by PATH funded projects as defined in the [PATH Program HMIS Manual](#).
  - **RHY Specific Data Elements**  
This report shows the client responses to the Federal Program Specific Data Elements that need to be collected by RHY funded projects as defined in the [RHY Program HMIS Manual](#).
  - **VA Specific Data Elements**  
This report shows the client responses to the Federal Program Specific Data Elements that need to be collected by VA funded projects as defined in the [VA Program HMIS Manual](#).

## Appendix B: Data Timeliness Reports

Timeliness reports show the time it takes for Homeless Services Providers to record intake, exit, and services information in the OC HMIS for each project on a client level. It is recommended to run and review these reports every quarter in preparation for the Data Quality Report Cards publication. The following reports are located in the Reports Page of HMIS, under the Data Analysis tab, Data Quality section.

- **Project Start Data Timeliness Report:**  
This report shows the number of days taken to record Project Start data into HMIS for each client enrollment.
- **Services Data Timeliness Report:**  
This report shows the number of days taken to record Services data into HMIS for each client enrollment.
- **Project Exit Data Timeliness Report:**  
This report shows the number of days taken to record Project Exit data into HMIS for each client enrollment.

## Appendix C: Data Quality Corrections Report

This report is sent quarterly by 211OC to all Homeless Services Providers that participate in the OC HMIS. The report flags Data Completeness and Data Accuracy errors across fields associated with the Universal Data Elements (UDE) for all projects. These errors are identified according to the [HMIS Reporting Terminology Glossary released by HUD](#).

There are three types of errors highlighted in the report:

- Client doesn't know/Client Refused, highlighted in orange
- Missing Information, highlighted in gray
- Data Issues, highlighted in magenta

Agency Administrators should review this report, identify all the errors flagged for their projects, and complete and/or correct the appropriate fields for the appropriate client enrollments in HMIS. To identify data quality errors in the *Data Quality Correction Report*, each column in the spreadsheet should be [filtered by the colors](#) associated with each type of error. The filtering process pinpoints the exact responses that present errors as well as the clients that present these errors. Additionally, to facilitate the correction process Agency Administrators should review the Data Quality Corrections Reference Guide explained in the next appendix.

## Appendix D: Data Quality Corrections Reference Guide

The [Data Quality Corrections Reference Guide](#) is available in the HMIS Data Quality section of the OC HMIS website. This guide describes what constitutes a data completeness and accuracy error for all the Universal Data Elements fields on the *Data Quality Corrections Report (Appendix C)*. Data completeness errors include responses such as client doesn't know, client refused, data not collected, and unanswered fields. Data accuracy issues include responses that are not valid for each data element according to the [HUD Data Standards](#), as well as responses that present data incongruences.

## Appendix E: Data Quality Report Cards Dashboard

The data quality report cards are published quarterly by 211OC. They are available on the [HMIS Data Quality Report Cards](#) page on the OC HMIS website. This dashboard assesses Data Completeness, Data Accuracy and Data



Timeliness for all the projects participating in the OC HMIS. The Data Quality Report Cards are published after agencies make revisions and corrections on their data using the Data Quality Corrections Report.

The first tab of the dashboard, Data Completeness and Accuracy, shows the percentage of data errors and valid responses for each Universal Data Element (UDE) by project. A response is considered valid when it is in accordance with the HUD Data Standards and it is different from “Client doesn’t know”, “Client Refused”, and “Data not Collected.” This tab also shows the Average Data Completeness Score for each project, which is a unique indicator of data completeness for each project, calculated by dividing the total valid responses that the project has across all the Universal Data Elements by the total clients that need an answer to each UDE.

The second tab of the dashboard, Data Timeliness, shows the average number of days it takes for homeless service providers to record intake, exit, and services information in HMIS for each project. The client-level data that contribute to the average timeliness calculations can be reviewed by the Agency Administrators by running the Data Timeliness Reports (See Appendix B).

## Appendix F: Data Accuracy Dashboard

The Data Accuracy Dashboard is available to Agency Administrators in HMIS. Agency Administrators should review this dashboard monthly for all projects at their agency in order to identify and correct any client information that is not truthful or accurate. It is important for Agency Administrators to share the dashboard information with all case managers and data intake staff that are familiar with the client information of each project, so they can report any data in the dashboard that doesn’t coincide with the real information of the clients they serve.

## Appendix G: Data Consistency Cheat Sheets

The following Data Consistency Cheat Sheets are available on the [OC HMIS website](#). They provide a detailed explanation of critical data elements that need to be collected by the Homeless Services Providers.

- [HMIS Data Element Cheat Sheet: Profile Creation and Enrollment:](#)  
This sheet gives guidance on how to collect and record client intake and project enrollment information in a standardized and consistent manner. It provides further explanation on the definition of intake and enrollment questions and response options. Additionally, it offers case managers questions they can use as guides to help collect certain data elements.
- [HMIS Data Element Cheat Sheet: Exiting, Annual, and Status Assessments:](#)  
This sheet gives guidance on how to collect client status updates and exit information in a standardized and consistent manner. It provides further explanation on the definition of the assessment and exit questions and response options. It also provides clarification on how to collect Project Exit Date and Destination by project type and lists examples of various scenarios.
- [HMIS Data Elements and Reporting Guide:](#)  
This sheet explains the way in which each data element affects project level and system-wise reports in the HMIS. It specifies the performance measure in which each data element is used and how missing or inaccurate data can yield data issues.