

HMIS Quarterly

The Homeless Missourians Information System Project

An Introduction to Data Quality

The Homeless Missourian's Information System (HMIS) is a project of the Missouri Association for Social Welfare (MASW). MASW has administered the HMIS Project for the Missouri Balance of State (BoS) Continuum of Care (CoC) since 2004. In 2012, MASW also became the lead HMIS agency for the Jasper/Newton CoC and continues to work closely with the Green/Christian/Webster CoC. The primary mission of MASW's HMIS Project is to use HMIS to improve data collection, advance the provision of homeless services, and promote data-informed decision making towards policies that prevent and end homelessness in Missouri. These newsletters are intended to provide additional information about HMIS use and will be produced on a quarterly basis. The first four newsletters will focus on data quality. This first issue will provide an overview on what data quality is and why it is important to the work we do.

Why Data is Important: Intuition vs. Cold, Hard Facts

Before defining data quality, it is important to understand why data is important. Historically, agencies have relied on the use of anecdotal evidence – or stories – to convey the impact their programs have on the clients they serve. As funds have become increasingly competitive across the board, funders at the federal, state, and local level are placing an increased emphasis on data and performance indicators as evidence that the programs they support actually makes a difference to clients and in their respective communities. As a result, data is used to drive the decision making process of

who gets funded and who does not.

Additionally, by capturing relevant information on clients served, agencies can use that data for decision making and strategic planning purposes. At a broader level, organizations can also begin to understand the extent and nature of homelessness in their community and better target services to best meet the needs of those they serve. For this to happen, though, data quality is crucial.

Data Quality Defined

Defining data quality is complex. While there is no one single definition of data quality, there are four terms most frequently used to describe it:

- Completeness
- Accuracy
- Timeliness
- Consistency

Completeness generally means ensuring that all of the appropriate and relevant data that agencies or funders need is being collected. HMIS has complete data as the ROSIE system does not allow for missing information in the system. While the ability to record “don't know” or “refused to answer” responses for various data elements ensures completeness in the system, it is important to minimize the use of these responses for data quality purposes.

Accuracy ensures that what is being recorded in a database is an accurate and true portrayal of what is happening in the real world. For example, if inaccurate income is recorded for a

client it could impact their eligibility for a particular program or at a broader level it could impact an agency's score on performance indicators relative to income. Accuracy is the single most important element to data quality.

Timeliness refers to how recent the information is in the system. How up-to-date the data is in the system becomes an important component and ultimately impacts the accuracy of the data as well. For example, if a manager asks how many clients are currently in the program and no data entry has taken place, that information could not be easily pulled by the agency without pulling client files or other spreadsheets. Additionally, if an agency serves a client and previous assistance received by the client has not been recorded or updated in HMIS, services may be duplicated. Likewise, client information may change over time. If updated information is not recorded in the system, analysis is done on old, inaccurate information. For this reason, HMIS requires all data collected to be input into HMIS within three business days.

Lastly, *consistency* encompasses two components. First, there should be an absence of apparent contradictions. For example, if there are five members in a household then the Family Tab in ROSIE should include family member information for four members in addition to the head of household. Second, it is also important that agencies and staff members utilize the same definition for capturing data. Particularly for reporting purposes, a core definition for household category and composition is important when entering data into ROSIE, as partner agencies may have varying

interpretations of what constitutes each of these elements. HMIS utilizes the Department of Housing and Urban Development (HUD)'s HMIS Data Standards, which defines each data element collected in ROSIE.

Why Data Quality is Important

Data quality is a critical problem facing public and private organizations alike. As the use of database systems continues to drive decision making, data quality becomes paramount. It becomes a larger issue because making decisions based on inaccurate information can have costly consequences - both economic and social - not only for organizations but for the continuum as well. In simple terms, inaccurate or poor data leads to poor decisions. A way to visually understand this concept is to think of the old adage garbage in is garbage out.

It is important to remember that a database will only process what it is given. If incorrect data (or garbage) is input into the system, the output is not likely to be informative. While information can still be gleaned from inaccurate information, it is only sorted garbage and no meaningful inferences can be made (see chart below). For actionable insight there must be quality data. This is extremely important to keep in mind because without it, decisions could be made based on faulty information. The HMIS Project encourages agencies to continue addressing data quality through their self-monitoring plans. Further guidance on data quality monitoring will be provided in future newsletters.

