

MARICOPA HMIS PROJECT DATA QUALITY PLAN

Definition of Data Quality

HMIS data quality refers to the extent that data recorded in the Maricopa HMIS Project accurately reflects the same information in the real world. A perfect overlap between data and reality would result in a hypothetical data quality rating of 100 percent, while a data quality rating of 0 percent would indicate that there is no match between the information entered into an HMIS and the same information in the real world. No data collection system has a quality rating of 100%. However, to meet the Maricopa HMIS Project goal of presenting accurate and consistent information on homelessness, it is critical that the Maricopa HMIS Project have the best possible representation of reality as it relates to homeless people and the programs that serve them. Specifically, it should be our goal to record the most accurate, consistent and timely information in order to draw reasonable conclusions about the extent of homelessness and the impact of homeless services.

Importance of Data Quality for HMIS Goals

Data quality is greatly improved when the goals of data collection are clear. The goals of HMIS on a national level were stated by Congress:

“There has never been an overall review or **comprehensive analysis** on the **extent of homelessness** or **how to address** it. The Committee believes that it is essential to develop an unduplicated count of homeless people, and an **analysis of their patterns of use** of assistance ...including how they enter and exit the homeless assistance system and the **effectiveness of assistance.**”

Thus, the 2001 Congressional directive targets information to understand:

- The extent of homelessness,
- The nature of homelessness (implied in “comprehensive analysis” and necessary to know “how to address”),
- Homeless service use patterns, and
- The effectiveness of the homeless service system

These goals are not only important on the federal level but also critical for understanding homelessness and program planning at the local level.

Extent of Homelessness

The number of homeless people has been at the center of debate for as long as homelessness has been acknowledged as a social problem. Due to inconsistent or no data collection, different estimation methods result in largely diverse numbers. One goal of HMIS is to estimate the number of homeless people that closely represents reality. By collecting personal information on all clients served, HUD hopes to generate an estimate of the unduplicated count of homeless people that access services nationally.

Achievement of this goal depends on high quality personal identifying data, such as Social Security Number, names, gender and date of birth, which are used to create unduplicated counts.

Nature of Homelessness

Additional HMIS data elements focus on the characteristics of those engaged in homeless services. Analyzing this information on a larger level will improve our understanding of the people experiencing homelessness, the issues they face, and their service needs. High quality data on gender, date of birth, race, ethnicity, veteran's status and disability, and household composition are needed for this goal.

Pattern of Homeless Service Utilization

People who are homeless often use more than one of the programs that are available to help them access housing, resolve their crisis, support them, and link them with other services. Accurate program entry and exit dates and information on residence prior to program entry are critical in determining service use patterns that assess average length of stay and movement among different homeless programs. The collection of accurate identifying information at each program is also necessary in order to identify the extent to which clients appear in multiple programs, how clients move through the system, and to detect cycles of homelessness.

Effectiveness of the Homeless Service System

Assessing the effectiveness of current the homeless service system is critical to finding successful solutions to ending homelessness. For that reason, information at program exit, such as destination and income, are important to learn if and how the system has helped to resolve clients' housing crisis and to improve their overall stability. Data on returning clients also contribute to this goal. Comparing program entry data with program exit data at the aggregate level will also provide a picture of homeless program impacts on the clients they serve.

Data Quality Issues and Standards

One of the most effective ways to collect quality data is to develop data collection and data entry standards that are implemented by all programs entering data into the Maricopa HMIS Project. These standards will ensure that data is entered in a timely fashion and consistently across different programs. Information on who should be responsible for adhering to these guidelines will be outlined in the next section.

Timeliness of Data

To be most useful for reporting, an HMIS should include the most current information on the clients served by participating homeless programs. To ensure the most up to date data, information should be entered as soon as it is collected. This is not a problem when data is entered directly into a database and not collected on paper. Intake data needs to be added within 2 working days of the intake process or client encounter.

Information that tends to change periodically also needs to be regularly verified and/or updated, such as information on income sources and amounts. Information other than intake data needs to be updated monthly by the fourth day in the following month.

Exceptions to the timeliness principle are made for domestic violence providers, which may wait until clients leave the shelter before entering data into the Maricopa HMIS Project.

Reporting Submission Deadlines:

1. Intake data should be entered into the Maricopa HMIS Project **within 2 working days of the intake process.**
2. Shelters only: Clients who stayed in shelter during the previous 24-hour period must be entered into the ShelterPoint Bed List within 24 hours.
3. Complete and accurate data for the month must be entered into the Maricopa HMIS Project by the **fourth working day of the month** following the reporting period. For example, data for the month of April must be entered into ServicePoint by the fourth working day of May.
4. Clients input into ServicePoint via a data integration process will not follow the above deadlines and instead will be input into ServicePoint in accordance with guidelines setup with each individual data integration project.

Data Completeness

To release meaningful information from the Maricopa HMIS Project, data need to be as complete as possible, i.e. they should contain all required information on all people served in a certain type of program (i.e. emergency shelter) during a specified time period. On the macro level, the goal of achieving adequate HMIS coverage and participation by all local programs is essentially about ensuring that the records are representative of all the clients served by these programs. When individual records or whole programs are missing, it is important to consider whether the characteristics of those served by the missing program are significantly different than those that are included. If a client record is missing, then aggregate reports may not accurately reflect the clients served by the program. Similarly, if an entire program is missing, data from

the Maricopa HMIS Project may not accurately reflect the homeless population in the community.

Missing Client Records

Even with all programs participating, it is possible that not every client served by the program is actually being entered. Missing client records from participating programs is particularly problematic since, unlike missing programs, the extent of those missing is difficult to quantify, and such gaps will not be factored into the extrapolations used to generate the overall homelessness count. That is, while it is possible to know what percentage of beds are represented by participating and non-participating programs and adjust estimated counts accordingly, it is much more difficult to say within a particular program what percentage of clients are not being entered. In addition, like with missing programs, missing clients within a program might have characteristics that skew the data findings. For example, those who stay only one or two nights might be more likely to not be entered. If this is the case, aggregate length of stay information can be severely skewed toward longer stays.

One strategy to address the issue of missing client records is to compare paper records (i.e. manual nightly shelter check-in lists) with the information entered into the Maricopa HMIS Project, which should reveal any missing client records.

Incomplete Client Records

The second type of incompleteness in a dataset is missing fields within particular client records. Standards are being set to ensure that all required fields are consistently answered. Where possible, if clients do not know or refuse to answer a particular question, this should be stored as an answer in the database, rather than leaving the field empty.

Data Accuracy:

1. All clients have unique ID numbers (Social Security Number or system-generated ID).
2. Missing/unknown data in ServicePoint is **less than 5% per month in required variable fields**. For example, if the data for the variable veteran is unknown for less than 5% of clients during the month, the data is accurate. If unknown is greater than or equal to 5%, the data is inaccurate. The **only** data variable exception to accuracy, with respect to 'Unknown' is the variable Destination.
3. No data incompatible with the agency's program in ServicePoint. For example, a family cannot be entered at a single men's shelter or a women's shelter.
4. Data in the Maricopa HMIS Project must accurately reflect client data recorded in the agency's client file and known information about the client and services provided to the client. For example, 'Exit Date' should be the date the client physically exited the shelter.
5. Data for active clients should be reviewed and updated monthly.
6. Null responses will be allowed only for those questions that are secondary or follow-up questions to a previous negative response. For example if a client answers "No" to "Pregnant" then the "Projected Birth Date" need not be answered. Also if the client

answers “No” to “Veteran”, then all of the questions relating to the client’s military history can be skipped.

7. Each agency program will establish procedures, controls and audit trails to ensure that all clients are entered into ServicePoint.

There are two main approaches to ensuring that all required fields are completed consistently: software validation and data quality reporting:

1. With software validation, records are not saved unless all required fields are entered. This approach is effective at capturing something for every field, but may also lead to staff entering inaccurate information just so they can save the data. The Maricopa HMIS Project has identified 92 required fields (including 51 matrix domains) that must be completed before the client data can be saved.

2. Data quality reporting occurs after the fact. An agency or system administrator produces reports of missing fields, and feeds that information back to the agency and data entry staff. Quality reports can be aggregate, producing a percentage of completeness for each field on an agency, program, or user level (e.g., User A completed the “race” field for 85% of new records.). These reports can be useful for assessing overall compliance with the standards, identifying training issues and/or software design issues, and addressing programs or users that are not meeting the standards. Quality reports can also be done on the client level. In this case, actual client lists are generated that highlight which data are missing for which clients. These reports are more useful when staff is able to go back and actually fill in the missing records.

The distribution of missing responses may not be assumed to match the distribution of captured responses. This is particularly true for “Yes/No” type questions. For example, if the question asks whether the client is a veteran, data entry staff may be consistently checking the “Yes” box for veterans, but often leaving the field blank if the client is not a veteran. The result of this practice would be a very low response rate for the question, and skew toward a high percentage of veterans showing up in the data set, if missing data are eliminated for the percentage calculations. Alternatively, data entry staff at a veteran shelter may also be ignoring the “Veteran” question, since every client they deal with is a veteran and the question seems superfluous.

Client sensitivities, in addition to data entry shortcomings, may also lead to an uneven distribution of missing responses. For example, clients who actually have disabilities may be more likely to refuse to answer questions about whether they have disabilities. Similarly, it is much more feasible to conduct exit interviews and collect destination information for clients who completed a program and had successful outcomes, then for those who returned to the streets and simply did not show up one day.

Records need to be regularly checked for their completeness. Most likely, basic client characteristics are entered during intake. Missing fields affects the ability to generate statistics about the specific field; therefore, procedures need to be in place on when to add

other information to the client record, such as income and health status information. As pointed out earlier, the later information also needs to be updated regularly. Depending on the type of program, these updates should be conducted at least monthly.

While most HMIS agency implementations collect valid intake data, including date of program entry, program exit information is often incomplete or missing all together. However, this information is critical in order to assess service utilization patterns and outcomes associated with service use. Without program exit information, service use records are incomplete. Procedures need to be in place to ensure that program exit information is collected and entered into the Maricopa HMIS Project. Program exit information is also necessary for calculating both length of stay and determining who is being served during a particular period.

Incomplete Identifying Information

Incomplete client identifying information – specifically, name, Social Security Number, date of birth, gender, and household identifiers – will impede the Continuum’s ability to determine unique clients, hinder the client matching process, and throw off the unduplicated count of clients and households. If insufficient data is provided, it is impossible to generate unique IDs and to verify whether two records represent the same client; thus, the count could appear higher than it is in reality. It could also be lower than it should be, if for example, there are two clients with the same name, but no Social Security Number is recorded for one of the clients. The Maricopa HMIS Project staff or data analyst might assume they are the same client. However, a Social Security Number could have proven that they were different clients.

Both higher and lower counts can have untoward consequences. If counts are too low, the scope of the problem is understated, and the amount of resources directed to homeless programs could be lowered. If the count is too high, the successes of the service system in reducing homelessness are minimized. This, too, can affect resource allocation. For this reason, it is best to concentrate on generating the most accurate number possible, which necessitates collecting quality identifying information.

Unfortunately, identifying information is most closely linked to concerns about client privacy and confidentiality, making collection of these data that much more difficult. Even though the Maricopa HMIS Project software does allow for anonymous data entry, this practice is directly linked to poorer data quality and is not allowed in the HUD Data and Technical Standards. As such, this practice should be avoided, since it automatically throws off the unduplicated count. There are other methods can be employed to protect client privacy and safety without compromising the quality of the data.

The highest standards should be applied toward achieving data completeness for all the fields used for unduplicating clients. The Maricopa HMIS Project has set a 95% standard of completeness for identifying fields, while, at least initially, somewhat lower standards of completeness might be expected for the other fields.

Homeless families also need to share a unique Household Identifier in order to link all of their members for analyses. If this information is missing, it is impossible to get accurate counts of families served, data on family composition will be invalid, and each family member may be incorrectly counted as a single individual served. For example, suppose a family of four entered a shelter, but the household identifier was not generated properly. Depending on how the analysis is done, they might be counted as four families, zero families and four unaccompanied individuals, or the records might be discarded. Although the Household Identifier itself is usually system generated, users must enter clients in a particular way in order to ensure that the clients are related properly.

Data Accuracy (Data Validity)

Information entered into the HMIS needs to be valid, i.e. it needs to accurately represent information on the people that enter any of the homeless service programs contributing data to the HMIS. Inaccurate data may be intentional or unintentional. In general, false or inaccurate information is worse than incomplete information, since with the latter, it is at least possible to acknowledge the gap. Thus, it should be emphasized to clients and staff that it is better to enter nothing (or preferably “don’t know” or “refused”) than to enter inaccurate information.

Intentionally False Information

There are many reasons why clients may provide false information. These include not wanting to be tracked, general privacy issues, vanity, embarrassment, paranoia, a desire to qualify for a particular service, fear of being turned away, or simply not caring enough. In addition, caseworkers may also opt to enter untrue information to help clients, because of time limitations, or lack of full knowledge.

Educating users about the benefits of the HMIS, ensuring there are privacy and security policies in place to protect data, creating operational uses of the data that directly improves services for clients, and developing trust between clients and Front-line staff can often mitigate the amount of false information provided. Also awareness of the options of saying “don’t know” or refusing to answer is important, since these answers are generally preferable to false answers. In addition to trainings on the importance of entering correct data, false information can be addressed through thorough data entry checks by third parties. The extent and types of false information in reports can be addressed after the fact by sharing results with stakeholders including data entry staff and consumers. Focus groups of consumers viewing the data may be able to identify areas where clients are inclined to be misleading.

Unintentional Errors

There are a number of unintentional errors that can occur during intake and data entry. These include:

- Accidentally selecting wrong response from dropdown;
- Misspelling (based on not knowing the proper spelling);

- Transposition of characters, or missed keys (accidental typographical errors);
- Swapped fields (e.g., first name in last name field, or intake date in exit date field);
- Use of nicknames instead of real names;
- Inaccuracies based on misunderstanding the question;
- Hearing the wrong information; and
- Transcription errors, including the inability to read handwriting.

Providing clients with access to review and correct the personal information that has been entered in the HMIS can improve data accuracy. This is also a client's right, as published in the HUD Data and Technical Standards. Clear procedures need to be set up to allow for access to HMIS data, as well as a shared understanding of staff on how to handle such requests and use them as an opportunity to verify data accuracy. The likelihood of data entry error increases when data is collected and entered by different staff. Data entry staff people who have not personally collected the information from clients have a reduced ability to recognize data collection errors from the data collected on paper. Similarly, if significant time elapses prior to data entry, staff may not recall the notes and unintentionally enter incomplete or inaccurate data. As such, it is advisable to either have the same staff collect paper records and enter the information within a very short period of time or enter data right into ServicePoint.

Data Consistency

Consistency of data collection and data entry refers to a shared understanding of what data need to be collected and in which way. Different interpretations of how questions for data collection should be asked or a lack of understanding of what answers to questions mean lead to aggregate information that cannot be correctly interpreted and presented.

For example, the question on residence prior to shelter entry has been interpreted by clients and staff in many different ways. Some thought this question referred to where individuals or families resided before losing their residence, others thought it referred the place where clients spent the night before accessing a shelter, and some may have given information on where they stayed in between. Given this range of different meanings, the information collected in this data field could not be correctly interpreted. As such, the HUD Data and Technical Standards clarified the meaning of residence as referring to the night before accessing shelter, and information on where clients lived before losing their residence is collected in separated data fields. To avoid misunderstanding of the interpretation of certain data fields, data collection and data entry staff in all agencies need to attend trainings that clearly address the meaning of all required data fields included in the HMIS. The HUD Data and Technical Standards provide the basis for such trainings for the required HMIS data elements.

Program-Level Staff

Achieving data quality is an ongoing, team effort. There are five key contributors to this goal: Front-line data collection staff, data entry staff, program executive staff, HMIS project staff, and the software itself. The next three sections will look at the role of each of these partners in achieving data quality in the first instance and validating data once it is entered.

It is essential that all staff throughout the agency have a shared understanding of the need and process for achieving data quality. This section looks at the roles and issues different staff within a program should consider in regards to data quality.

Front-line staff

The foundation of data quality lies with front-line staff. Front-line staff members are the first people to collect information from a person receiving homeless services; they also ascertain where to put it, and then record it. In addition to the intake stage, front-line staff may also gather data throughout the client's participation in the program, at exit, and at particular follow-up points. These individuals may also enter the data (see section on data entry staff) but this section focuses on aspects of sound process and understanding to increase the accuracy of the data.

Shared Understanding of Purpose / Process

All front-line staff as well as other key stakeholders in the collection, analysis, and dissemination of data should have a shared understanding of the purpose of the data collection (e.g., to document effects of policy change, to support claims to funders, to better shape services to client needs, to understand trends across the region), and the overall process to meet those goals (e.g., front-line staff collect and record information, data entry staff enter into computer, data is "cleaned" for accuracy, data is analyzed, and reports are generated for distribution). The process could be delineated in general terms in the Maricopa HMIS Project Policies and Procedures. At minimum, all staff should have access to a written memo outlining the data collection process and explaining the importance of accurate data and maintaining data quality. Documenting the process also conveys a sense of the importance of assuring sound data.

Establishing a Rapport with Consumers

Much of the data in the Maricopa HMIS Project is self-reported by people seeking homeless services. Often people in the vulnerable position of being homeless may give incorrect information intentionally or unintentionally for a host of reasons. Inaccurate information can be minimized by establishing a rapport with the consumer.

In an emergency shelter, intake is not the ideal time to ask for personal information. He or she may be disoriented or nervous. Ideally an intake worker collects only the minimally required data needed to assign a bed or a service. Once the person is settled in

the shelter and has his or her bearings, the front-line staff may have more success in building a relationship. It often helps to explain fully why questions are being asked and what will be done with the information. If this information is shared clearly and respectfully consumers are more likely to share accurate information. The rapport developed, even in a short time, can make all the difference. In non-emergency settings, front-line staff may have more time to let a person get settled before asking assessment/intake questions. In both cases, explaining the confidentiality procedures and security practices of the agency is essential and often required by law or local policy.

The manner in which questions are asked is critical in establishing a good rapport and getting accurate information. Experience suggests that basic respect and courtesy makes a big difference. Someone seeking homeless services is likely to be vulnerable, perhaps scared and feeling disconnected. Good eye contact, a warm tone, and conveying an appreciation that the information requested can be very personal, sensitive, and private all contribute to trust. Assuring clients that this information is intended to better serve them is also important.

Consumers often are not aware of the critical connection between funding and services. Communicating why the client's information is being collected, how it will be used, and how it helps the agency secure and sustain funding for the program may also be a valuable way to build understanding and support from the client. It is advisable for all staff to agree on a minimal level of information that all clients should receive. The agency may want to write out talking points and/or train users on how to consistently explain the HMIS project and data collection.

Gathering True Information

It is the responsibility of front-line staff to collect and record true information from clients. Clients may be suspicious or paranoid of having their personal information entered into a computerized data system and may supply false information. Clients may supply false identifying information if they do not want to be tracked. They may also supply false information about age, prior living status, disability, pregnancy, or income, for privacy reasons, or out of embarrassment or vanity. Clients should be informed about the privacy and security procedures, and the allowable uses of the data. Explaining the goals of HMIS and how the data collection system can support individuals' access to services may also help overcome this barrier to accurate information. Though clients should be encouraged to answer the questions, they should also be informed that no answer is preferable to a false answer.

Clients may also want to give the most advantageous answer, and believe that providing a false answer (e.g., stating a lower income) will entitle them to additional benefits, or save them from an undesirable outcome, such as being turned away from shelter. If this seems to be occurring, staff should emphasize the goals of HMIS as well as the reasons that data are collected. When possible, staff should note any third-party documentation that has been provided for verification purposes. Finally, some clients may just not care and provide whatever answer occurs to them. It may or may not be obvious to the front-line

staff when this is occurring. But, a trained interviewer is often able to tell. In any case, staff should be discouraged from entering false information.

In addition to false information provided by clients, staff may try to help their clients better access services by recording incorrect information. Staff may choose the first answer from the pick list, if time is short. Or they may find it easier to estimate a birth date or automatically record “No,” rather than ask a sensitive question. They may also enter information that they believe will best serve the client. Finally, when staff does not know an answer, they may out of the best intentions decide to use a “placeholder” (e.g., use of “Boy” or “Girl” in a child’s first name field, when name is unknown). These practices should be avoided.

Reasons for providing false information:

- Privacy (not wanting to be tracked)
- Embarrassment / modesty
- Paranoia
- Desire to qualify for service
- Fear of being turned away
- Not caring

Reasons for providing true information:

- Improved direct services
- Benefit eligibility and info validated
- Want to tell their story
- A relationship has been created
- Understand privacy/security procedures
- See benefits of HMIS for homelessness
- Given the option to not answer

Avoiding Inconsistencies and Unintentional Errors

In addition to false information, front-line staff also should also be on guard against unintentional errors or inconsistencies. Several types of unintentional errors can occur during the intake process (as opposed to the data entry process).

The first type of unintentional error occurs when the client misunderstands the question. A common example of this is misunderstanding what is meant by the “Prior Residence” question. A client might wish to give the residence where they lived for years prior to the night before coming to the shelter as opposed to the place they stayed for one night prior to shelter entry. The actual meaning of “disability” is also easily misunderstood. Inconsistent interpretation is also a problem with these fields. Two people with the same condition might give divergent answers regarding whether they have a disability. It is up to the front-line staff to query further to determine whether which answer is most appropriate.

Language barriers can also contribute to misunderstanding the question. If many clients speak only Spanish, for example, it is helpful to have a copy of the questions and answers in Spanish available, so clients can read along. Staff members may also sometimes hear the wrong answer, especially when working with clients with strong accents or language barriers. But, this could also be a problem even without those constraints. It is quite easy to hear “No” when someone says “Don’t Know.” The intake space should be quiet and private to ensure that staff can hear clearly and follow up on sensitive questions to make sure they understand the response.

Use of nicknames and aliases is another place where misunderstanding and inconsistency causes problems. Clients who are asked “What is your name” are more likely to provide the name by which they are called than their legal name. Consistency problems occur when the client gives their legal name in one interview and their nickname in a second interview. Misspellings of names and other fields are common but easy to guard against by following a simple rule of always confirming the spelling of client names. Even a common name like “Smith” could sometimes be “Smythe.” Of course, spelling of names could be misheard. Circling or highlighting an unusual spelling will ensure that the data entry staff notices it.

Recording Information: The Paper vs. Computer Dilemma

There are two ways to record information during an interview: writing the information on **paper** to be entered later into a computer *or* entering directly into a **computer**. There are advantages and disadvantages to both.

Recording information on paper can lend itself to a more personal discussion when speaking of sensitive information. Some people are put off by a computer being in the room as it can represent easy access by many people or that “big brother” (government) can potentially access the information now or in the future. For someone that may have a criminal record, a serious mental health condition, or substance abuse history, that idea can impede sharing accurate information. Paper can feel more personal.

The downside to first collecting information on paper is that there is an added step (and staff time) for entering the data in the computer. Errors can also be introduced in the process of transcribing the data, and this factor can be increased if intake workers have poor handwriting. On the other hand, the extra step does afford a chance to check information and enter at a slower pace when the consumer is not with you. Data entry will be much easier if the paper form looks very similar to the computer screen. However, if the computer intake process is not straightforward, it may not make sense to replicate that on paper.

<p>Tip: If entering data directly on the computer, consider allowing clients to see the screen as you type or view a report of their information at the end of the interview. This builds trust and enhances accuracy.</p>

The advantage to entering data directly into the computer is that data entry is done immediately. However, trying to maintain a flow in conversation, while typing, and switching screens leaves room for data entry error and can set an impersonal feel to the interview. The physical presence of a computer placed between the intake worker and staff can also negatively impact rapport. Consider two things if circumstances permit: (1) allow the consumer to see the screen with you as you enter and (2) go back after the consumer has left (immediately if possible) to review that the data entered is accurate. Seeing the screen together shows the consumer you are entering what s/he says and allows him or her to catch a mistake. Alternatively, the intake worker can print a report of the client's information and present it to the client for review at the end of the interview.

Tip: Paper forms should closely resemble the layout of the computer screen. Questions should appear in the same order. The paper form should provide checklists of response options wherever possible, and options should match the options in ServicePoint. The Maricopa HMIS Project has developed an input form for staff use.

Ultimately the choice to enter directly into ServicePoint will depend on whether (1) the agency feels that the software is easy enough and fast enough to be used in real time, (2) the frontline staff is comfortable enough with the system so that it is not a distraction, (3) most of the clients served will not find the use of the software distracting, and (4) the arrangement of computers, desks, and chairs in the agency allows for use of the computer during intake without unduly hindering rapport. If all of these factors are in place, direct entry into the computer is recommended. Otherwise a well-designed paper intake form is preferable.

If intake workers use paper to record the interview, they should be sure to write legibly, such that they or someone else can transcribe the data. If shorthand is used, it should be consistent. The same abbreviation should not be used to mean different things.

Benefits to Clients

Providing direct benefits to consumers can create incentives for clients to share accurate information and for front-line staff to support real-time data entry. For example, the eligibility module can determine benefit eligibility for a client. The eligibility module collects required information such as age, race, family size, income sources, disability, veteran status, etc. and then screens the information to determine if the client is eligible for state and/or federal benefit programs. A future enhancement of the software will then generate the application form. Benefits screening requires accurate information otherwise the exercise is moot, so front-line staff and consumers are more likely to collect and immediately enter complete and accurate client data. Other consumer benefits associated with immediate entry of accurate information include: getting accepted into a service program, qualifying for special support within the agency, or not having to complete assessment surveys more than once within the continuum if the data is shared with appropriate agencies.

Data Entry Staff

If data is collected on paper, it must be subsequently entered into the computer. What follows are some key considerations in this process to further ensure data quality.

Data Entry Accuracy

Data entry staff is responsible for entering accurate data. There are a number of unintentional errors that can occur during data entry,

The classic data entry errors are typographical. Such errors can be based on missed keys or transposition of characters. This problem is reduced to the extent that drop down boxes, check boxes, auto-fill, and other tools are used in place of free form text. However, errors are also possible with these fields. One common error is accidentally selecting the wrong response from a drop-down list.

Another type of error is swapped fields, such as entering the last name in the first or middle name field, or intake date in exit date field. The data entry staff person should be cognizant of the layout of the screen and make mental note of any irregularities, such as a form where the last name appears before the first name.

Tip: Data entry staff can catch many errors by proofreading a hard copy report of the data they entered. Different staff members can check each other's work.

Misspelling is another type of error. While the proper spelling should have been recorded by the intake worker, the entry worker should make sure to read the intake form carefully. If the data entry staff is doubtful about the spelling, they should make a note of it and check with the person who wrote it originally. The same is true for questions regarding illegible writing or ambiguous shorthand.

Proofreading

The main way to mitigate the risk of data entry errors is to proofread the data against the original form. It is best to proofread a hard copy. Instead of printing the actual screen and proofreading one client at a time, data entry staff can print a report of all the data on all the clients they entered that day and proofread the report. They can then go back and fix errors after all of the proofreading is complete. If there are multiple data entry people on staff, different staff members should check each other's work.

Professional proofreaders often proofread backwards checking one letter at a time against the original document. This technique can be helpful in checking the free text fields. Reading backwards prevents the mind from seeing what it expects instead of what is actually typed. Reading out loud is another tip. It allows multiple senses to be engaged in the work. Sometimes the ears can catch what the eyes miss.

Another technique is to proof for different types of errors separately. For example, given the types of errors listed in the previous section, it makes sense to first look for misspellings or typographical errors, then for incorrect drop down answers, then for swapped fields. Keeping a running list of the types of errors found can help provide ideas of mistakes to look for in the future.

Training

Standardized training provided by the Maricopa HMIS Project is vital to quality data entry. Software training is done using a standardized curriculum, presented consistently in the Maricopa HMIS Project computer lab.

User training should also cover how to collect data, how to pass data from front-line staff to data entry staff; how to log questions about the data and how to resolve those questions; how to give feedback; and expectations for participating in user meetings. Some of these issues may be program-specific, so they may need to be addressed by internal training rather than as part of the system-wide software training.

Who Should Do Data Entry?

Ideally, the same person who collects HMIS data should enter that data into ServicePoint. This assures consistent interpretation of the questions, the answers, and handwriting. At many service agencies having one person do both is not possible; e.g., day shifts might collect the data, night staff might enter it when things are less hectic. Also, the same people who are good at interviewing clients may not be good at entering data, or vice versa.

When it is not possible to have the same person collect and enter data, a clear process and communication between data intake and entry staff is essential. This will minimize any misinterpretations. Staff members doing these two tasks should meet before they begin and consistently check-in to resolve any confusion over notes on the intake form, agree on shorthand usage, clarify confusing questions, and discuss anything else that comes up. Supervisors should ensure that this communication happens regularly at each agency.

Tip: Intake and data entry staff should meet regularly to resolve any confusion over notes on the intake form, agree on shorthand, and clarify confusing questions. A data quality log can track open questions.

Feedback Loop between Data Entry and Intake

Finding out three months down the road that data entry staff was skipping some fields, or interpreting a question incorrectly, can render a period of data useless. Worse would be to never find out about incorrect data entry and use these invalid data in aggregate reporting. This can be prevented fairly easily with a regular feedback loop. A feedback loop simply means building in a regular meeting time to review and answer questions that data entry

staff may have for the front-line staff (people filling in the paper forms), and correcting any mistakes and/or misunderstandings before they are repeated multiple times.

At an initial meeting, include the HMIS Agency Administrator for your agency, all data entry staff and volunteers, all front-line staff, and (ideally) the agency director. The meeting should layout the need for the data, the importance of each role, the meeting schedule, the Data Quality log, the process to resolve any questions about processing the data, and the feedback loop. A **Data Quality Log** tracks information about unresolved data entry issues, such as the date of issue, nature of issue/specific reference, date of resolution and nature of resolution. Data Quality Logs should be part of regular meetings with data entry and front-line staff.

Volunteer Issues Regarding Data Entry

Many homeless service agencies don't have the resources to cover all of their HMIS needs and often rely on volunteers for data entry. Volunteers can pose challenges given the fact that turnover is high, and there is little binding them to the position other than their personal commitment and dedication to helping the agency. Volunteers should receive the same training as regular staff and have the opportunity of regular check-in with data collectors (just as regular staff that enter data do). They should be encouraged to log all questions in a data entry issues log and be encouraged to list anything that is unclear. It may be overwhelming at first, but will assure that they have a shared understanding of the importance of their job, and assure the data they enter reflects what the front-line staff and consumer intended.

Tip: Data handling processes should include procedures for entering new clients, updating existing client information, handling exit data, and reenrolling returning clients.

Agency and Program Directors

Agency and program directors set the stage and maintain momentum in maintaining data quality. They may or may not have a hands-on role, but their management of the process and emphasis on quality data is key.

Executive Directors of agencies set the tone for the organization and play direct and indirect roles. *Direct* roles include actually monitoring data quality processes and tools through regular, substantive meetings with program directors and/or other key staff. *Indirect* roles include keeping data quality "on the radar" and establishing a process to advance data quality goals.

Establishing Processes

Program directors, in consultation with intake and entry staff, establish the workflow processes for gathering and entering data. These processes should include procedures not only for entering new clients, but also communicating information about when the client exits and when data need to be updated. This is especially true when data entry is not

done by the person who interacts with the client. Passing information between staff about new clients may be as straightforward as placing the clients file in the inbox of the data entry staff. There may be a different process to pass information about exiting clients. The data entry staff may just get a list every day of all the clients who exited with their destinations and other exit information. Or, it may be the job of the caseworker to type in exit dates and other exit information, even if someone else is doing the initial data entry. There might be a third process for handling any other updated information about the client. For example, there may be a separate form that is used by staff to record updates, which could be distributed to data entry staff for entry and subsequently routed to the client's paper file.

Organizational Support

Data entry in the short-term does not save or hurt lives. In a crisis environment it is extremely challenging to convince users to take the time to carefully enter data. Therefore there must be top to bottom organizational support for quality data collection and entry. If issues related to data collection and entry are never discussed at full staff meetings or in written messages from the director, the impression is given that data entry is not valued as much as other work in the agency. The agency's culture should reflect the importance of and commitment to quality data.

Tip: Data quality procedures and updates should be folded into already scheduled regular staff meetings.

Data Quality Plans and Job Performance

A program director should create a data quality plan for the program. Data quality plans set benchmarks for data quality, establish monitoring procedures, and incentives for compliance. The director will need to create internal procedures to meet or exceed the threshold specified by the Maricopa HMIS Project data quality plan. The director is responsible for ensuring the content of the plan is understood and the benchmarks are achieved by all users.

If the agency conducts periodic job performance reviews, directors may address data quality as part of that process. For staff directly involved with processing data, the director might link successful completion of tasks (e.g., timely entry, completeness, accuracy) to job performance reviews. This is another concrete way to show that data quality is important to the director and the agency.

Monitoring Data Quality

At most homeless service agencies (especially emergency shelters) finding any extra time to monitor data is nearly impossible. Therefore monitoring data quality should be integrated into the daily flow of running the organization. At regular staff meetings, agency and/or program managers should emphasize the importance of the data, any upcoming needs of the data, and efficient uses of the data within or outside of the agency.

For example, a program director can mention that HMIS data for a recent quarter was particularly helpful in completing a grant proposal or that a report of homeless people coming from within the state was used to inform a bill being proposed by state legislators. Seeing the usefulness of the data is likely to keep staff committed to the process of data quality.

If data entry staff keep logs and maintain a feedback loop with front-line staff, the results of open (unresolved) or closed (resolved) issues should be shared semi-regularly as well. Your agency may have other opportunities that better lend themselves to regular check in. What is important is that assuring data quality becomes part of your agency's culture.

Good Training for Staff HMIS Users

The Maricopa HMIS Project use a modified train-the-trainer approach for ServicePoint that delegates agency specific training to the agency-level. The benefit to this model is cost efficiency and allowing flexibility to agencies to tailor the software to their specific needs. The downside is the potential that the training won't be as thorough or consistent across agencies or programs. That said, the train-the-trainer model works best with standardized curriculum and materials. Curriculum sounds rather formal, but it is simply a documented approach to what is emphasized in the training and how it is covered. The train-the-trainer approach can be utilized for both software training as well as data quality assurance training. If a train-the-trainer model is used, the agency or program director should ensure that the agency's trainer is supported in this role by having it built into his or her job description and allowed time to fulfill the responsibilities.

Mandating Refresher Training for Staff

Refresher training in ServicePoint is needed periodically for data entry staff to ensure ongoing data quality. The need can vary depending on the number of changes/upgrades to the software and the overall complexity of the software. It also depends on the skills of the users. Staff that are less comfortable with computers in general should consider refresher trainings to catch mistakes they may be making, and affirm correct usage. All staff can benefit from trainings that go deeper into software. Refresher training in software should be required for all users at least annually.

Use of Data for Program Purposes

HMIS should help staff do its job better, not create new jobs. For example, HMIS can dramatically improve how agency staff assign beds, organize case management, determine appropriate referrals, assess clients' needs, track progress and analyze a program's or an agency's progress in meeting its goals. The more staff and clients benefit from the HMIS, the more data quality will improve. This is not always easy to accomplish, but with that emphasis HMIS can be a support rather than an obstacle, and data quality will benefit.

Another example is incorporating the use of client data from HMIS in case management or staff discussions. While following your security procedures (e.g., not printing clients' names on meeting documents), sharing these records will ensure that printed client files or reports are in a clear, easy to read, standardized format to facilitate discussion of a client's needs. This feature requires that the data is entered carefully and accurately. If there are data entry errors, the meeting and sharing of the file can serve as a data quality check. Mistakes are more likely to be caught and corrected with more eyes reviewing.

The program director can use the data reporting features to regularly mine the HMIS data for program statistics. These are useful not only for grant writing, funding reports, and advocacy purposes, but also for generally keeping abreast of the number of people an agency is serving at particular times, client characteristics and needs, and what services clients are receiving. If front-line and data entry staff know that directors rely on HMIS data on a regular basis to learn what is happening in the program, data quality is bound to be higher.

HMIS Project Staff

This section describes specific strategies that the Maricopa HMIS Project Director and staff can do to foster data quality.

Mechanisms Prior to Entering Data

Maricopa HMIS project staff will provide all agencies and all data entry staff with good software documentation including a data dictionary and cheat sheets for entering data. It is also important for the Maricopa HMIS Project to provide consistent and continual training of staff involved in data collection and entry.

Data Quality Plan

HMIS project staff members are responsible for developing and enforcing the data quality plan. As previously mentioned, data quality plans set benchmarks for data quality, establish monitoring procedures, and incentives for compliance.

Consistency Among Agencies

The Maricopa HMIS Project staff should ensure consistent data collection and quality across all of its participating programs. This can be achieved through some or all of the following mechanisms:

- **Establishing a user group subcommittee on data quality.** A data quality subcommittee can be charged with making sure data quality remains prominent in Continuum decision-making. Each of the following actions might be implemented and overseen by this subcommittee with frequent reporting to the wider User Group committee.

- **Continue regular user meetings.** These meetings fulfill many needs. They keep HMIS users/overseers abreast of HMIS efforts across the Continuum. This helps maintain momentum, identify user concerns and software needs, share solutions to common problems and best practices, and provides opportunities to review and refine data quality processes. This is a good use of time by HMIS staff saving them help calls and individual site visits.
- **Conduct routine analyses/comparisons between programs.** Comparisons among CoC programs can serve as a healthy competition to meet the standards the CoC agrees to. It can also serve to identify best practices in data quality and general usage.
- **Defining parameters for data definitions.** The user group is uniquely positioned to ensure common parameters (or meaning) to questions in the HMIS software. For example, is asthma a physical disability? Is PTSD a mental illness or a separate category? If there is confusion around questions that the HMIS system administrator or software documentation cannot answer easily, the Data Quality subcommittee can discuss and agree upon a convention. This information should be shared throughout the CoC (and also with the software provider).
- **Requiring monthly or quarterly reports generated out of HMIS to verify timely data entry and quality.** Quarterly reports to the Advisory Board and to the CoC are a way to galvanize agencies and promote a culture where data collection and quality is taken seriously and completed. Going back six months later to catch up on data entry is a recipe for poor data.
- **Programming queries and generating regular data quality reports.** The HMIS project staff can play an important role by providing agencies with standard queries or tools to help them verify their agency's data quality. Similarly, these reports can be run on the overall system data to identify data errors.
- **Institutionalizing a feedback loop to agencies.** HMIS project staff (or members of the Data Subcommittee) may create a process by which agencies submit data quality updates (examples of data entry issues log, meeting minutes, and reports of data). The subcommittee can use this information to establish a reasonable standard among agencies and help the Maricopa HMIS Project assess itself on the quality of its data.

Validating and Cleaning Data

Checking data on homeless persons from multiple programs and various ways of entering data is a constant challenge. But, once the data has been collected, there are ways to "clean" the data, that is, fix any errors.

Agency or program data can be compared with findings from a study by local researchers where there was some overlap in focus. For example, did the local annual census count find 40% families among homeless people in the community; whereas you are finding 20% in your data? What might account for the discrepancy? The census could be wrong,

the HMIS data could be wrong, or the parameters could be incorrectly defined. Maybe a large agency serving homeless families has lost their IT staff and data was not entered for the past three months.

Validating and cleaning data should also occur at the client level within the database. These can be automatic, or if the software does not check for incorrect data, the HMIS database administrator can do it manually. Some incorrect fields are more obvious than others.

At the Continuum-level there are also data validation and cleaning tasks to consider. The HMIS Project Director and the User Group Data Subcommittee) needs to establish clear guidelines for agencies across the Continuum. Consider the following:

- **Establishing conventions for dealing with missing data.** For example, this may include defining an arbitrary exit date for clients that have not interacted with the program for a certain period of time.
- **Outliers.** Outliers are data that lie outside of an accepted normal range of values. Outliers should be flagged and reviewed by whoever is analyzing the data. Upon review, some outliers may be determined appropriate, some deleted. For example, if monthly income for everyone in the system falls between \$0-\$3,500 except for one “outlier” of \$15,000, you may determine to delete that outlier or double check with the client or case worker. It is an educated judgment call. It may be a yearly income that was incorrectly listed as monthly.
- **Comparing self-reported vs. system generated data.** An example of validating self reported data against system data is comparing the percentage of people who reported that they stayed in another emergency shelter prior to program entry with the actual percentage of people in the system who were recorded in ServicePoint at two or more shelters. If all or most emergency shelters are participating in HMIS, and 60% of clients said they spent the previous night in shelter, but only 10% were recorded in more than one shelter, then it is possible that many clients are not being entered, or something is wrong with either the self reporting process or the data matching process across shelters.

Appendix 1: Validations of HMIS Data Elements

Name

- First and Last name not same
- Suffix properly formatted
- No numerals in name fields
- Suffixes not in last name field
- First name is not “Husband,” “Wife,” “Man,” “Woman,” “Boy,” “Girl,” “Child”, “Baby,” “Baby Girl,” “Baby Boy” or similar

Social Security Number/Quality Code

- SSN has all numbers and no dashes
- 9 digits when quality code indicates complete
- Less than 9 digits when code indicates partial
- All digits not same (333333333); all numbers not sequential (123456789)

Date of Birth

- Earlier than current date
- Earlier than program entry date
- Later than 90 years from present
- Not minor in adult shelter/Adult in youth shelter

Ethnicity/Race

- Primary and secondary race not the same

Gender

- Men not pregnant
- No Male in woman’s shelter/Woman in men’s shelter

Veteran Status

- Client under 18 not veteran
- All veterans in veteran shelter
- Those receiving veteran’s pension marked as veteran

Disabling Condition

- Those receiving SSDI for themselves are marked as having a disability
- Those indicating substance abuse, mental health, physical disability, developmental disability, HIV/AIDS marked as having disability

Residence prior to program entry / How Long At Place

- Self-report not contradicted by other HMIS data

Zip Code of Last Permanent Address/Quality Code

- Zip code complete if quality code marked a complete
- Zip code five or nine characters
- Zip code valid (If list of zips available)
- Zip code has only numbers

Program Entry Date/ Program Exit Date

- All clients have a program entry date.
- Program Entry Date later than Birth Date
- Program Entry Date prior to Exit Date.
- Entry and exit date not the same in residential shelter
- Length of program enrollment outliers are reasonable considering program type

Household ID

- Single person in family shelter
- Family in individual shelter


Appendix 2: Maricopa HMIS Project Program Entry Screen


Entry Data			
Provider	Community Information Referral (CIR) (#1935)		
Type	- Select -		
Entry Date	09/26/2005	12	55 PM
2.3 Date of Birth			
<u>Date of Birth</u>	<input type="text"/>	(mm/dd/yyyy) H G	
2.4 Race and Ethnicity			
<u>Primary Race</u>	<input type="text" value="Other"/>	H G	
<u>Secondary Race</u>	<input type="text" value="- Select -"/>	H G	
<u>Ethnicity</u>	<input type="text" value="Other (Non-Hispanic/Latino)"/>	H G	
2.5 Gender			
<u>Gender</u>	<input type="text" value="Male"/>	H G	
<u>Is the client transgendered?</u>	<input type="text" value="No (HUD)"/>	H G	
2.8 Residence Prior to Program Entry			
<u>Prior Living Situation</u>	<input type="text" value="- Select -"/>		
<u>Length of Stay</u>	<input type="text" value="- Select -"/>		
<u>Is Client Homeless?</u>	<input type="text" value="- Select -"/>		
<u>Homelessness Primary Reason</u>	<input type="text" value="- Select -"/>		
<u>Extent of Homelessness?</u>	<input type="text" value="- Select -"/>		
<u>Is Client Chronically Homeless?</u>	<input type="text" value="- Select -"/>		
2.9 Zip Code of Last Permanent Address			
<u>Zip Code of Last Permanent Address</u>	<input type="text"/>		
<u>Zip data quality</u>	<input type="text" value="- Select -"/>		
3.1 Income and Sources			


Monthly Income Subassessment:


Monthly Income 


Assessment Date 06/21/2005 01 : 31 PM

Source of Income - Select - 

Last 30 Day Income 

Last 90 Day Income (optional) 

Start Date (required) (mm/dd/yyyy) 

End Date (optional) (mm/dd/yyyy) 

Monthly Income 

2.7 Disabling Condition(s)


Do you have a disability of long duration?  No (HUD) 

3.3-3.7 Disabilities


Disabilities Subassessment:


Disabilities 

Assessment Date 01 : 31 PM

Disability Type - Select - 

Start Date (mm/dd/yyyy) 


Above condition is going to be long term? - Select - 

End Date (mm/dd/yyyy) 

Disabilities 

3.8 Domestic Violence

Domestic Violence Victim?  Yes 

Extent of Domestic Violence - Select - 

3.12 Employment

Unemployed? - Select - 

[If Unemployed, Looking for Work?](#)

- Select -  [H](#) [G](#)

[If Employed, Hours Worked Last Week?](#)

[H](#) [G](#)

[If Currently Employed, Select Tenure](#)

- Select -  [H](#) [G](#)

3.13 Education

[Highest Level of Education Attained](#)

- Select -  [H](#) [G](#)

Degrees Subassessment:

Degrees Earned Information

Assessment Date 06/21/2005 01 : 31 PM

[Degree Earned](#)

- Select -  [H](#) [G](#)

[Start Date](#)


(mm/dd/yyyy) [H](#) [G](#)

[Disregard \(do not answer\)](#)

(mm/dd/yyyy) [H](#) [G](#)

Degrees Earned Information


[Currently in School or Working on any Degree?](#)

- Select -  [H](#) [G](#)

[If Yes, School Name](#)

[H](#) [G](#)

[Received Vocational Training?](#)

- Select -  [H](#) [G](#)


3.14 General Health Status

[Health Condition Compared to People of Your Age](#)

- Select -  [H](#) [G](#)

3.15 Pregnancy Status

[Pregnant?](#)

- Select -  [H](#) [G](#)

[If Yes, Projected Birth Date](#)

(mm/dd/yyyy) [H](#) [G](#)

2.6 Veteran Status

[US Military Veteran?](#)

- Select -  [H](#) [G](#)

3.16 Veteran's Information

[Discharge Type](#)

- Select -  [H](#) [G](#)

[Months Served on Active Duty in the Military](#)

[H](#) [G](#)

Military Branches subassessment:


Military Branches

Assessment Date 06/21/2005 01 : 31 PM


Military Branch **H G**

Start Date (mm/dd/yyyy) **H G**

End Date (mm/dd/yyyy) **H G**

Military Branches 

Military Service Era subassessment:


Military Service Era Information 

Assessment Date 06/21/2005 01 : 31 PM

Military Service Era **H G**

Start Date (mm/dd/yyyy) **H G**


End Date (mm/dd/yyyy) **H G**

Military Service Era Information 

Did You Serve in a War Zone?

H G

War Zone subassessment:

War Zone Information 

Assessment Date 06/21/2005 01 : 31 PM


War Zone **H G**

Months Served in a War Zone **H G**

Received hostile or friendly fire in a War Zone? **H G**

Start Date (mm/dd/yyyy) **H G**

End Date (mm/dd/yyyy) **H G**

War Zone Information 

3.17 Children's Education

If Child Enrolled, Type of School

 H G

If No, Date Last Enrolled in School

 (mm/dd/yyyy) **H G**

Child Enrollment Difficulties subassessment:

Child Enrollment Difficulties

Assessment Date 06/21/2005 01 : 31 PM

Enrollment Problem

 H G

Start Date

 (mm/dd/yyyy) **H G**

End Date (Optional)

 (mm/dd/yyyy) **H G**

Child Enrollment Difficulties

Matrix Levels Upon Entry subassessment:

Entry Matrix Levels

Assessment Date 06/21/2005 01 : 31 PM

Program Entry Date

 (mm/dd/yyyy) **H G**

Shelter/Housing

 H G

Employment

 H G

Income

 H G

Food and Nutrition

 H G

Child Care

 H G

Child(ren)s Education Level

 H G

Adult Education


 H G

Legal


 H G

Health Care Coverage	<input type="text" value="- Select -"/>	H G
Life Skills	<input type="text" value="- Select -"/>	H G
Mental Health	<input type="text" value="- Select -"/>	H G
Substance Abuse	<input type="text" value="- Select -"/>	H G
Family Relations	<input type="text" value="- Select -"/>	H G
Mobility	<input type="text" value="- Select -"/>	H G
Community Involvement	<input type="text" value="- Select -"/>	H G
Safety	<input type="text" value="- Select -"/>	H G
Parenting Skills	<input type="text" value="- Select -"/>	H G
Contact With Child(ren) (Optional)	<input type="text" value="- Select -"/>	H G
Physical Health (Optional)	<input type="text" value="- Select -"/>	H G
Support Network (Optional)	<input type="text" value="- Select -"/>	H G
Energy Assistance (Optional)	<input type="text" value="- Select -"/>	H G
Energy Education (Optional)	<input type="text" value="- Select -"/>	H G
Energy Efficiency (Optional)	<input type="text" value="- Select -"/>	H G
Client ID for Printing (Optional)	<input type="text"/>	H G
Disregard (do not answer)	<input type="text"/>	(mm/dd/yyyy) H G

Matrix Levels Interim subassessment:

Interim Matrix Levels 	
Assessment Date	06/21/2005 01 : 31 PM
Program Entry Date	<input type="text" value="06/21/2005"/> (mm/dd/yyyy) H G
Program Interim Matrix Date	<input type="text"/> (mm/dd/yyyy) H G
Evaluation Period	<input type="text" value="- Select -"/> H G
Shelter/Housing	<input type="text" value="- Select -"/> H G
Employment	<input type="text" value="- Select -"/> H G

Income	<input type="text" value="- Select -"/>	H G
Food and Nutrition	<input type="text" value="- Select -"/>	H G
Child Care	<input type="text" value="- Select -"/>	H G
Child(ren)s Education Level	<input type="text" value="- Select -"/>	H G
Adult Education	<input type="text" value="- Select -"/>	H G
Legal	<input type="text" value="- Select -"/>	H G
Health Care Coverage	<input type="text" value="- Select -"/>	H G
Life Skills	<input type="text" value="- Select -"/>	H G
Mental Health	<input type="text" value="- Select -"/>	H G
Substance Abuse	<input type="text" value="- Select -"/>	H G
Family Relations	<input type="text" value="- Select -"/>	H G
Mobility	<input type="text" value="- Select -"/>	H G
Community Involvement	<input type="text" value="- Select -"/>	H G
Safety	<input type="text" value="- Select -"/>	H G
Parenting Skills	<input type="text" value="- Select -"/>	H G
Contact with Child(ren) (Optional)	<input type="text" value="- Select -"/>	H G
Physical Health (Optional)	<input type="text" value="- Select -"/>	H G
Support Network (Optional)	<input type="text" value="- Select -"/>	H G
Energy Assistance (Optional)	<input type="text" value="- Select -"/>	H G
Energy Education (Optional)	<input type="text" value="- Select -"/>	H G
Energy Efficiency (Optional)	<input type="text" value="- Select -"/>	H G
Client ID for Printing (Optional)	<input type="text"/>	H G
Disregard (do not answer)	<input type="text"/>	<i>(mm/dd/yyyy)</i> H G

Interim Matrix Levels 






Appendix 3: Maricopa HMIS Project Program Exit Screen

Exit Data			
Exit Date	09/26/2005	01	09 PM
Reason for Leaving	-Select-		
If other, specify	<input type="text"/>		
Destination	-Select-		
If other, specify	<input type="text"/>		
Tenure	-Select-		
Subsidy	-Select-		
Notes	<input type="text"/>		

3.1 Income and Sources





Monthly Income Subassessment:

Monthly Income

Assessment Date	06/21/2005 01 : 31 PM
Source of Income	- Select - 
Last 30 Day Income	<input type="text"/> 
Last 90 Day Income (optional)	<input type="text"/> 
Start Date (required)	<input type="text"/> (mm/dd/yyyy) 
End Date (optional)	<input type="text"/> (mm/dd/yyyy) 

Monthly Income

3.12 Employment

Unemployed?	- Select - 
If Unemployed, Looking for Work?	- Select - 
If Employed, Hours Worked Last Week?	<input type="text"/> 
If Currently Employed, Select Tenure	- Select - 

3.13 Education

[Highest Level of Education Attained](#)

- Select -  **H G**

Degrees Subassessment:

Degrees Earned Information 

Assessment Date 06/21/2005 01 : 31 PM

[Degree Earned](#)

- Select -  **H G**

[Start Date](#)


(mm/dd/yyyy) **H G**

[Disregard \(do not answer\)](#)

(mm/dd/yyyy) **H G**

Degrees Earned Information 


[Currently in School or Working on any Degree?](#)

- Select -  **H G**

[If Yes, School Name](#)

H G

[Received Vocational Training?](#)

- Select -  **H G**

3.14 General Health Status

[Health Condition Compared to People of Your Age](#)

- Select -  **H G**

Exit Matrix Levels subassessment:

Exit Matrix Levels 

Assessment Date 04/06/2005 04 : 50 PM

[Program Exit Date](#)

04/06/2005 (mm/dd/yyyy) **H G**

[Shelter/Housing](#)

- Select -  **H G**

[Employment](#)

- Select -  **H G**


[Income](#)

- Select -  **H G**


[Food and Nutrition](#)

- Select -  **H G**


[Child Care](#)

- Select -  **H G**

[Child\(ren\)s Education Level](#)

- Select -  **H G**

Adult Education	<input type="text" value="- Select -"/>	H G
Legal	<input type="text" value="- Select -"/>	H G
Health Care Coverage	<input type="text" value="- Select -"/>	H G
Life Skills	<input type="text" value="- Select -"/>	H G
Mental Health	<input type="text" value="- Select -"/>	H G
Substance Abuse	<input type="text" value="- Select -"/>	H G
Family Relations	<input type="text" value="- Select -"/>	H G
Mobility	<input type="text" value="- Select -"/>	H G
Community Involvement	<input type="text" value="- Select -"/>	H G
Safety	<input type="text" value="- Select -"/>	H G
Parenting Skills	<input type="text" value="- Select -"/>	H G
Contact with Child(ren) (Optional)	<input type="text" value="- Select -"/>	H G
Physical Health (Optional)	<input type="text" value="- Select -"/>	H G
Support Network (Optional)	<input type="text" value="- Select -"/>	H G
Energy Assistance (Optional)	<input type="text" value="- Select -"/>	H G
Energy Education (Optional)	<input type="text" value="- Select -"/>	H G
Energy Efficiency (Optional)	<input type="text" value="- Select -"/>	H G
Client ID for Printing (Optional)	<input type="text"/>	H G
Disregard (do not answer)	<input type="text"/> (mm/dd/yyyy)	H G

[Exit Matrix Levels](#) 

Appendix 4: Maricopa HMIS Quality Control Reports

To be added later.