EXECUTIVE SUMMARY:

This ART report is the first in a series of reports designed to monitor data quality by locating recorded client data which is missing, is incorrect, or which is inconsistent with other recorded data for the same client. This report focuses on locating errors and incongruities in the areas of age, gender and household relationship. Twelve common data quality issues are identified:

a. Client's date of birth has not been recorded.
b. Client's age is negative due to incorrect date of birth.
c. Client's age is out of the normal range (>100) - probable incorrect date of birth.
d. Client's date of birth is the same as the date that the client was entered into the system - probable date of birth error.
e. Client's age (<15) is inconsistent with their HH relationship (mother, grandfather, etc.).
f. Client's gender has not been recorded.
g. Clients Veteran status = "yes" but age is less than 18.
h. Client's gender is inconsistent with his/her HH relationship. (Female-father, male-stepmother, etc.)
i. Client's HOH designation = "yes" but relationship to HOH is not equal to "self".
j. Client's relationship to HOH = "self", but HOH designation = "no" or null.
k. Client is a household member but is missing a household relationship.
l. Client is recorded as pregnant, but age or gender is inconsistent with this. (Not female and/or <15).

The “Summary” section reports the number and percentage of clients for whom each of the twelve issues applies. It then lists the clients with identified issues and shows which issue(s) apply to which client(s). The “Detail” section further expands the client list to display and highlight the actual values that are in error or are conflict with each other.

AUDIENCE:

This report is intended for use by Agency Administrators, by data entry staff, or by HMIS administrators responsible for data quality. The report can be run at any provider level at or above the selected program.
FREQUENCY:

It is recommended that this report should be run at least monthly for each program.

PURPOSE:

Monitoring data errors and incongruities is a basic data quality procedure, since such issues will result in erroneous reporting.

INSTRUCTIONS:

Instruction on how to retrieve, copy, run, and read this report is outlined below. Requests for additional information concerning the report function/design should be directed to Bowman Systems’ staff via email (ART_Reports@BowmanSystems.com).

How to retrieve and copy: Detailed step-by-step instructions concerning how to retrieve and save a copy this ART Report to your personal system can be found on the Bowman ART website at (http://www.BowmanSystems.com/ARTreports.html)

How to install: The original version of this report will be permanently located in a read-only “ART Gallery” folder on your ART site. This original version of the report is a template and it must be copied into another folder and mapped to your data before it can be used. Detailed instructions for installing.

How to read: Upon opening the report, the User will be prompted (see Diagram 1) to specify (or select) parameters which control the data returned by the report. Once the User has provided these parameters by responding to the user prompts, a green check-mark will appear next to each field to indicate that a valid selection has been made. The User should then single-click the “Run Query” button to generate the Report.
The three user prompts contained in this report are outlined below along with instruction on how each should be answered:

1. **Enter Effective Date**: The user should enter (or select from the calendar) the current date so that the most recent values for each of the data elements will be considered.
2. **Select Provider(s)**: The user selects the program(s)/provider(s) to include as the subject of the report.
3. **Included records back to this date**: The user should enter (or select from the calendar) a single date. The report will include all client records from this specified date to present (that is the date of the most recent data build).

**How to read** The report results consist of three tabs:

Tab A is the main body of the report and includes:

- a listing of the data quality issues covered in the report
- a summary of the number and percentage of issues identified
- a summary of the issues identified by client

Tab B details the erroneous or conflicting data for each client with identified issue(s).

Tab C is an appendix which displays the User selected parameters and additional information provided for as a reference. These three tabs are displayed and further explained below:
Tab A: Summary (Diagram 2): This tab contains three report elements:

- **Report Header** The Report Header contains the title of the report, and specifies the date parameter specified by the user. This header will appear only each page of the printed document if the report detail spans multiple pages. When running the report in “modify” mode, the header is only visible in “page layout” view and not in “edit report” view.

- **Report Body** The main body of tab A contains three sections:
  - **Data Quality Issues Identified in this Report:** This section simply describes the twelve separate data quality issues which are identified in this reports. These issues, are tagged A-L, are referenced by this letter/tag throughout the remainder of the report.
  - **Summary:** This section is self explanatory and provides counts and percentages of identified issues (A-L).
  - **Detail by Client** This section lists the clients with identified data quality issues sorted by client id number. Issues which apply to the client are identified by “error” in red font. Issues that do not apply are shown as “ok” on green font.
This can span multiple pages depending upon the number of records being examined.

- **Report Footer**: The report footer contains the title of the report, the name of the tab, the page number, the version number, and the date/time the report was run/printed. Like the header, the footer is only visible in page layout view when the report is run in modify mode.

<table>
<thead>
<tr>
<th>client #</th>
<th>issue</th>
<th>age</th>
<th>gender</th>
<th>date of birth</th>
<th>date client added</th>
<th>household inactive</th>
<th>HH relation ended</th>
<th>head of household</th>
<th>household relation</th>
<th>household relationship</th>
<th>client pregnant</th>
<th>military yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>211</td>
<td>J</td>
<td>35</td>
<td>Male</td>
<td>5/29/1972</td>
<td>12/1/1992</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Self</td>
<td>Yes</td>
<td>No</td>
<td>No (HUCC)</td>
</tr>
<tr>
<td>381</td>
<td>I</td>
<td>24</td>
<td>Female</td>
<td>9/27/1994</td>
<td>9/5/90</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>mother</td>
<td>Yes</td>
<td>No</td>
<td>No (HUCC)</td>
</tr>
<tr>
<td>787</td>
<td>I</td>
<td>50</td>
<td>Female</td>
<td>3/7/1949</td>
<td>1/1/1992</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>51.719</td>
<td>No (HUCC)</td>
</tr>
<tr>
<td>1,132</td>
<td>I</td>
<td>49</td>
<td>Female</td>
<td>8/11/1959</td>
<td>1/1/1993</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>wife</td>
<td>No</td>
<td>46.918</td>
<td>No (HUCC)</td>
</tr>
<tr>
<td>4,837</td>
<td>I</td>
<td>50</td>
<td>Female</td>
<td>10/3/1978</td>
<td>12/1/1992</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>father</td>
<td>Yes</td>
<td>29.642</td>
<td>No (HUCC)</td>
</tr>
<tr>
<td>4,837</td>
<td>I</td>
<td>33</td>
<td>Female</td>
<td>10/3/1978</td>
<td>12/1/1992</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>husband</td>
<td>No</td>
<td>31.585</td>
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<tr>
<td>6,040</td>
<td>J</td>
<td>44</td>
<td>Female</td>
<td>5/4/1964</td>
<td>9/2/92</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Self</td>
<td>No</td>
<td>71.729</td>
<td>No (HUCC)</td>
</tr>
<tr>
<td>7,846</td>
<td>H</td>
<td>7</td>
<td>Female</td>
<td>9/17/2001</td>
<td>7/1/92</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>son</td>
<td>No</td>
<td>60.784</td>
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<tr>
<td>0.048</td>
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<td>null</td>
<td>7/1/92</td>
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<td>Yes</td>
<td>No</td>
<td>Self</td>
<td>No</td>
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<td></td>
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<tr>
<td>9,223</td>
<td>K</td>
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<td>Female</td>
<td>2/21/2002</td>
<td>7/19/92</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>null</td>
<td>Yes</td>
<td>6.541</td>
<td>No (HUCC)</td>
</tr>
</tbody>
</table>

**Diagram 3**

**Diagram 4**

**Tab B-Detail**: The report body of Tab B displays the actual field values for all clients who were identified as having one of more data quality issue. The type of issue is identified, and the erroneous or conflicting values are highlighted in red font. (See Diagram 3 and 4)

**Tab C - Additional Information**: This tab is provided as a reference to the User running the report and lists the parameters specified in the user prompts (Diagram 5) as well as the total duplicated and unduplicated client counts for the specified Provider(s) (Diagram 6).
### TECHNICAL NOTES:

1. The manner in which the selected program’s clients were identified for inclusion in the report’s results was designed to be as comprehensive as possible. If a client meets any one (or more) of the following he/she is then considered to be a client of the specified program and included in the report results.

- Client created by provider on or after report start date
- Provider was last to update client profile on or after report start date
- Program entry into provider by client or after report start date
- Provider recorded as a service provider for client or after report start date
- Service recorded for client by provider on or after the report start date
- Provider recorded as a need provider for client or after report start date
- Call record recorded by provider for client or after report start date
- Goal set for client by provider on or after start date
- ROI recorded for client by provider on or after start date
2. It should be noted that inactive clients, inactive entry-exits, inactive needs, inactive services, inactive call records, inactive goals and inactive ROIs were all exclude from the results.

3. It should be noted that this report identifies potential errors and in some cases the data displayed may be accurate. For example a client could actually be in excess of age 100 or could be a 13 year old head of household.

**REPORT MODIFICATION:**

Users with ad-hoc ART licenses may wish to modify/customize this report to better suit their needs and purposes. When modifying an Art Gallery report such as this one, the user will need to make a copy of the original report into a different folder. This copy can be created either by using the “save as” feature or by clicking on the “organize” icon in folder view.

NOTE: The original un-modified version of this report must be retained in the “ART Gallery” folders. These folders are read-only so that changes cannot be inadvertently made to the original version. Since the “ART Gallery” folders are a read-only folder, any/all copies of the report for modification purposes must be made into some other folder.

**MODIFICATION OPTIONS:**

Ad hoc users may choose to customize this report to include only the types of errors relevant to a specific program or specific grouping of programs. The report has been designed in such a way as to facilitate such modification. To remove an un-needed error element from the report, the ad hoc user need only:

- Delete the irrelevant row(s) from the listing in Tab A
- Delete the irrelevant column(s) from the “Summary” section of Tab A
- Delete the irrelevant column(s) from the “Client Detail” section of Tab A and the tables in Tab B
- Delete the irrelevant variable from the report filters in Tabs A and B.

Experienced ad hoc users also will be able to included additional error elements in the report if needed. This would be done by constructing additional error identification variables according to the logic utilized in this report, and by adding related rows, columns and report filters related to the added variables.
MAPPING OBJECTS:

A listing of the report objects and their source universe and source folder is provided below. Objects are arranged by query and by object type.

========================================================================

Query Name: Data
Universe: _u (Client Universe)

Result Objects:

- Client Uid from Clients folder
- Client Unique Id from Clients folder
- Client First Name from Clients / Client Unique Id folder
- Client Last Name from Clients / Client Unique Id folder
- Gender from Clients / Assessments / Additional Profile Information folder
- Date of Birth from Clients / Assessments / Additional Profile Information folder
- Age (Calculated) from Clients / Assessments / Additional Profile Information folder
- Household Relate. Inactive from Clients / Household Relationships folder
- Household Relate. Head of Household from Clients / Household Relationships folder
- Household Relate. Relationship from Clients / Household Relationships folder
- Household Relate. Date Ended from Clients / Household Relationships folder
- Client Date Added from Clients folder
- Household Inactive from Households folder
- Household Uid from Households folder
- Pregnant? from Clients / Assessments / Medical folder
- U.S. Military Veteran? from Clients / Assessments / HUD-40118 folder

Filter Objects:

- Entry Exit Entry Date from Clients / Entry Exit (Outer) folder
- Entry Exit Provider Id from Clients / Entry Exit (Outer) folder
- Client Inactive from Clients folder
- Entry Exit Inactive from Clients / Entry Exit (Outer) folder
- Client Provider Creating from Clients folder
- Client Date Updated from Clients folder
- Client Provider Updated from Clients folder
- Needs Inactive from Clients / Needs (Outer) folder
- Need Date Added from Clients / Needs (Outer) folder
- Need Provider from Clients / Needs (Outer) folder
- Call Record Inactive from Clients / Call Records (Outer) folder
- Call Record Data Added from Clients / Call Records (Outer) folder
- Call Record Provider Creating from Clients / Call Records (Outer) folder
- Service Inactive from Clients / Services (Outer) folder
#0220 Revision History

<table>
<thead>
<tr>
<th>Version</th>
<th>Description of Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>V09.01.22</td>
<td>Original version -BETA</td>
</tr>
<tr>
<td>V11.04.13</td>
<td>Revision for compatibility to SP5x/ART3x</td>
</tr>
<tr>
<td>V11.06.28</td>
<td>Revision to repair minor defects Tab L and Tab J</td>
</tr>
</tbody>
</table>
| V4 | Revision: Corrects veteran’s age range from >18 to >=18 on Tab H  
Revision History added to User Manual |