



Guidelines for Creating the RSR and ADR Encrypted Unique Client Identifier (eUCI)

The Ryan White HIV/AIDS Program (RWHAP) Services Report (RSR) and AIDS Drug Assistance Program (ADAP) Data Report (ADR) client-level data XML files must include an encrypted Unique Client Identifier (eUCI) for each client. This eUCI allows HAB to link data that belong to the same client across multiple recipients/providers, while also protecting the client's identity. The eUCI can also help HAB follow care over time. In this document, we provide an overview of the eUCI, how you can incorporate it into your system, and how encryption and de-duplication work. We also provide recommendations for consistent data entry and data cleaning.

How Can I Incorporate the eUCI into My Data System?

All recipients/providers should use the same guidelines for creating and encrypting the UCI. RSR-Ready Systems and ADR-Ready Systems already have the correct UCI creation and encryption algorithms incorporated into their systems. TRAX also creates the eUCI as part of the client-level data XML file generation function.

If you do not use one of these systems, you can create the eUCI with the **eUCI Application**. If you have technical assistance questions regarding the application, contact Data.TA@CAIglobal.org.

What is the RSR System eUCI?

Some RWHAP provider data management systems refer to the RSR/ADR UCI as the Unique Record Number (URN). The UCI, or Unique Client Identifier, is the first step in developing the eUCI. It is composed of the following data elements:

- First and third characters of first name
- First and third characters of last name
- Full date of birth: *MMDDYY*
- Sex at Birth code: *1=Male, 2=Female, 9=Unknown*

Note:

You don't need to use the eUCI Application if you have one of these systems to generate your RSR or ADR XML file (they create eUCIs for you!):

RSR-Ready Systems

- AIRS
- ARIES
- AWARDS
- CAREWare
- Casewatch Millennium
- CHAMP
- CPCDMS
- eClinicalWorks
- eCOMPAS
- Epic (*RSR utility*)
- eShare
- NextGen
- Provide Enterprise
- SCOUT
- TCT

ADR-Ready Systems

- CAREWare
- eCOMPAS
- Provide Enterprise
- SCOUT

XML-Generating Tools

- TRAX for the ADR and RSR

The UCI cannot be created from invalid or missing data. For UCI consistency, all recipients/providers must use the same coding rules for first and last name. If you are creating your own UCI, you must use the same rules applied by the eUCI Application, shown in the table below.

Issue	Rule	Example
Name less than 3 characters	Third character of the UCI is 9.	First Name: TJ DOB: 06/11/1987 Last Name: Leising Sex at Birth: Male UCI: T9 LI0611871
Spaces	Replaced with a 9.	First Name: Sam DOB: 08/24/1990 Last Name: De Young Sex at Birth: Male UCI: SMD9 0824901
Apostrophes and hyphens	Replaced with a 9. However, a name that <u>starts</u> with an apostrophe or hyphen, or any other non-letter character, is assumed to be an error, and the eUCI will be invalid.	First Name: 'Rei Last Name: Smith DOB: 04/23/1975 Sex at Birth: Male UCI: Invalid, no UCI created First Name: Luke Last Name: Fu-Smith DOB: 05/11/1949 Sex at Birth: Male UCI: LKF9 0511491
Accented letters	Accented letters are replaced with non-accented letters	First Name: Raúl DOB: 09/22/1983 Last Name: Grünwald Sex at Birth: Male UCI: RUGU 0922931

How does encryption work?

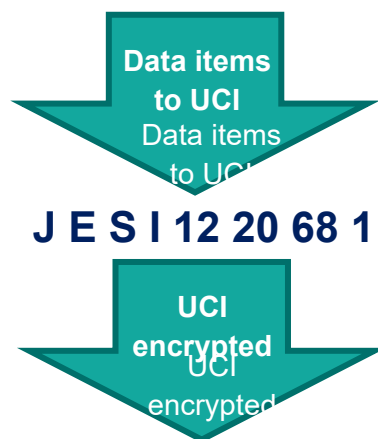
The 11-character UCI is then encrypted with the SHA-1 hashing algorithm to create a 40-character string of letters and numbers. The SHA-1 is a trap door algorithm, meaning that the original UCI is unrecoverable from the eUCI. The SHA-1 algorithm meets the highest privacy and security standards.

How does de-duplication work?

It is possible that different clients have identical 40-digit eUCIs. Therefore, recipients and providers must add a 41st character at the end of the eUCI to distinguish these clients. If only one client within a recipient/provider data system has a given UCI, the suffix should be “U” for unique. If more than one client has the same UCI, the final character of the first client’s eUCI needs to be “A,” the final character of the second client’s eUCI needs to be “B,” and so on. The suffix prevents multiple clients from having the same eUCI.

Recipients/providers must assign the final character by determining whether two records with the same UCI actually belong to the same client. This can be done through the review of other data elements. If the duplicate records with the same UCI are, in fact, the same client, the client data elements must be merged and reported under one record. If the records represent different clients, the 41st character of the eUCI must be manually assigned based on other information in the system as “A,” “B,” “C,” etc. HAB expects recipients/providers to eliminate duplicates at the file level; the client-level data file will result in an error upon upload if multiple records share the same eUCI.

Name: Joe Smith Sex at Birth: Male Birthdate: 12/20/1968



CCD741F7984DD5DA59955CC74B3B9EA6DF5203F

How can I improve data entry to reduce the number of eUCIs per client?

To help ensure that no client has more than one eUCI, data elements should be consistently recorded across recipients/providers and over time. To reduce multiple eUCIs per client, please follow the below recommendations:

- Record legal names. For first and last names, use, in this order, 1) name as it appears on driver license, 2) name as it appears on primary insurance card, and 3) name as it appears on any other legal identification, including passport or ID from country of origin.
- If a client has no ID and you see the client is duplicated because of inconsistent use of name forms, make the final decision on how to record the name.
- For nicknames, mailing names, alternate names, and last name "suffix" (e.g., Junior), create separate fields. These fields will not be used to create the eUCI but can help your agency with mailings and addressing the client in the way he/she wants.

It is not uncommon for clients to change their last names or adopt new nicknames. If one of the data elements that makes up the eUCI changes for a given client, the client's eUCI will change. HAB recognizes this limitation. If a client reports a change in a data element or you or your staff detect a change, be sure to edit data so the latest information is captured.