RSR/ADR in Focus

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

The Ryan White Services Report (RSR) and 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 grantees/providers, while also protecting the client's identity. As the RSR and ADR systems mature, the eUCI will 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 grantees/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, please contact Data.TA@CAIglobal.org.

What Is the RSR System eUCI?

Some Ryan White 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
- **Gender code**: 1=Male, 2=Female, 3=Transgender, 9=Unknown

The UCI cannot be created from invalid or missing data. For UCI consistency, all grantees/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.

> You don't need the eUCI Application if you use one of these systems to generate your RSR or ADR XML file (They create eUCIs for you!):
>
> ### RSR-Ready Systems
> - AIRS
> - ARIES
> - AVIGA
> - AWARDS
> - CAREWare
> - Casewatch Millennium
> - CHAMP
> - eCOMPAS
> - eShare
> - Provide Enterprise
> - SCOUT
> - SuccessEHS
>
> ### ADR-Ready Systems
> - CAREWare
> - eCOMPAS
> - Provide Enterprise
>
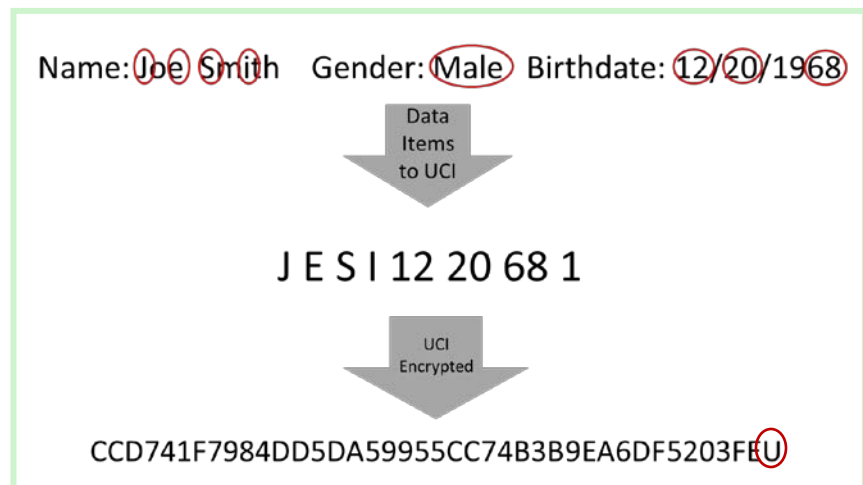> ### XML-Generating Tools
> - TRAX for the ADR and RSR

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Issue	Rule	Example	
Name less than 3 characters	Third character of the UCI is 9.	First Name: TJ DOB: 06/11/87 UCI: **T9**LI0611871	Surname: Leising Gender: Male
Spaces	Replaced with a 9.	First Name: Sam DOB: 08/24/1990 UCI: SM**D9**0824901	Surname: De Young Gender: Male
Apostrophes and hyphens	Replaced with a 9. However, a name that _starts_ 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: 04/23/75 Gender: Male UCI: Invalid, no UCI created	First Name: Luke Last Name: Fu-Smith DOB: 05/11/49 Gender: Male UCI: LK**F9**0511491
Accented letters	Accented letters are replaced with non-accented letters	First Name: Raúl DOB: 09/22/1983 UCI: **RUGU**0922931	Last Name: Grünwald Gender: Male

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, grantees/providers must add a 41st character at the end of the eUCI to distinguish these clients. If only one client within a grantee/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.

Name: (Jo)e (Sm)ith   Gender: (Male)   Birthdate: (12)/(20)/19(68)

Data Items to UCI

J E S I 12 20 68 1

UCI Encrypted

CCD741F7984DD5DA59955CC74B3B9EA6DF5203FEU

Grantees/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

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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 grantees/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.

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 grantees/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, adopt new nicknames, or change how they report their gender. 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.