Outline

- Overview of Programs Within Bureau of HIV/AIDS Prevention and Control (BHIV)

- Data Sources

- Medicaid Match Process and Results

- Examples of Application of Merged Data

- Next Steps

Overview: NYC BHIV Programs

o HIV Care and Treatment Program
  - Administers funds awarded under the NY Eligible Metropolitan Area (EMA) Ryan White Part A Program

o HIV Prevention Program
  - Oversees services aimed at preventing the transmission of HIV, including HIV testing, PrEP or PEP, screening or treatment for STI and Hepatitis C

o HIV Epidemiology and Field Services Program
  - Oversees HIV case reporting and surveillance, including managing the HIV surveillance registry
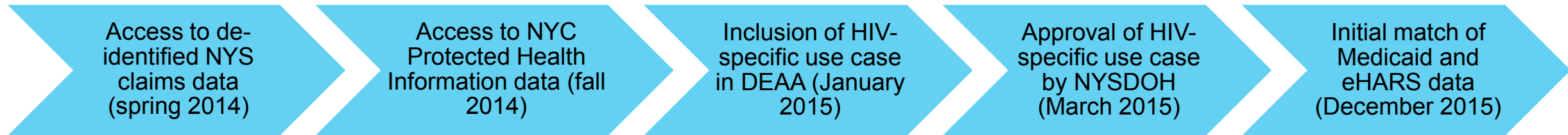
Data Sources Used for Matching

Enhanced HIV/AIDS Reporting System (eHARS)	Electronic System for HIV/AIDS Reporting and Evaluation (eSHARE)	Salient Interactive Miner (SIM)
-Mandatory reporting (New York State law) - Population-based, most complete source of laboratory test data (CD4 and viral loads)	-Reporting system for HIV services contracts, including Prevention and RWPA (for which it produces the annual RSR) -Captures client demographics, enrollments, services (individual and group), referrals, assessments, and some clinical outcomes	-Medicaid managed care encounters and fee-for-service claims data -Includes data on enrollments, laboratory, and pharmacy services utilization (including ART prescriptions)

Obtaining Medicaid Data Access

o Data sharing intent
- Improve services and the health of Medicaid recipients while reducing costs

o New York State Department of Health (NYSDOH) Requirements
- Demonstrate a strong governance structure and compelling project need ("use case")

- Review of Medicaid data privacy

- Review of Data Exchange Application and Agreement (DEAA)
    - ✓ Use cases from bureaus and programs and list of approved individuals for DOHMH
        - Business Administration Agreement (BAA) for non-DOHMH collaborators
    - ✓ Distribution guidelines on materials produced using Medicaid data

- Participation in SIM's training course

Timeline of Medicaid Data Access – for Analysts in BHIV

Access to de-identified NYS claims data (spring 2014) → Access to NYC Protected Health Information data (fall 2014) → Inclusion of HIV-specific use case in DEAA (January 2015) → Approval of HIV-specific use case by NYSDOH (March 2015) → Initial match of Medicaid and eHARS data (December 2015)

Matching NYC Medicaid Data to eHARS

o Objectives

- To integrate data from SIM and eHARS, in order to examine healthcare coverage, enrollments, services, and outcomes among people living with HIV (PLWH) in NYC
- To be able to merge other data sources (e.g., Ryan White program reporting) with the Medicaid-eHARS match results

o Collaboration between multiple programs/units

- Medicaid data workgroup convened by Care & Treatment Program
- Match conducted by the HIV Epidemiology and Field Services Program within BHIV

Matching NYC Medicaid Data to eHARS (cont.)

- o Matches conducted in 2015 and 2017
  - • Criteria
    - ✓ Initial match: 2012-2014 NYC Medicaid enrollees and HIV-positive patients in eHARS alive as of 01/01/2012, diagnosed and reported to DOHMH by 12/31/2015

    - ✓ Second match: 2015-2016 NYC Medicaid enrollees and HIV-positive patients in eHARS alive as of 01/01/2015, diagnosed and reported to DOHMH by 09/30/2017

- o Process and results presented here from the initial match
  - • Reviewed and approved by NYSDOH

Summary of Data Matching Process

o Creating a de-duplicated Medicaid dataset to be matched eHARS

o Using deterministic matching process to confirm matches

- Compare each Medicaid record to each record in eHARS using a set of keys made up of first name, last name, date of birth and social security number
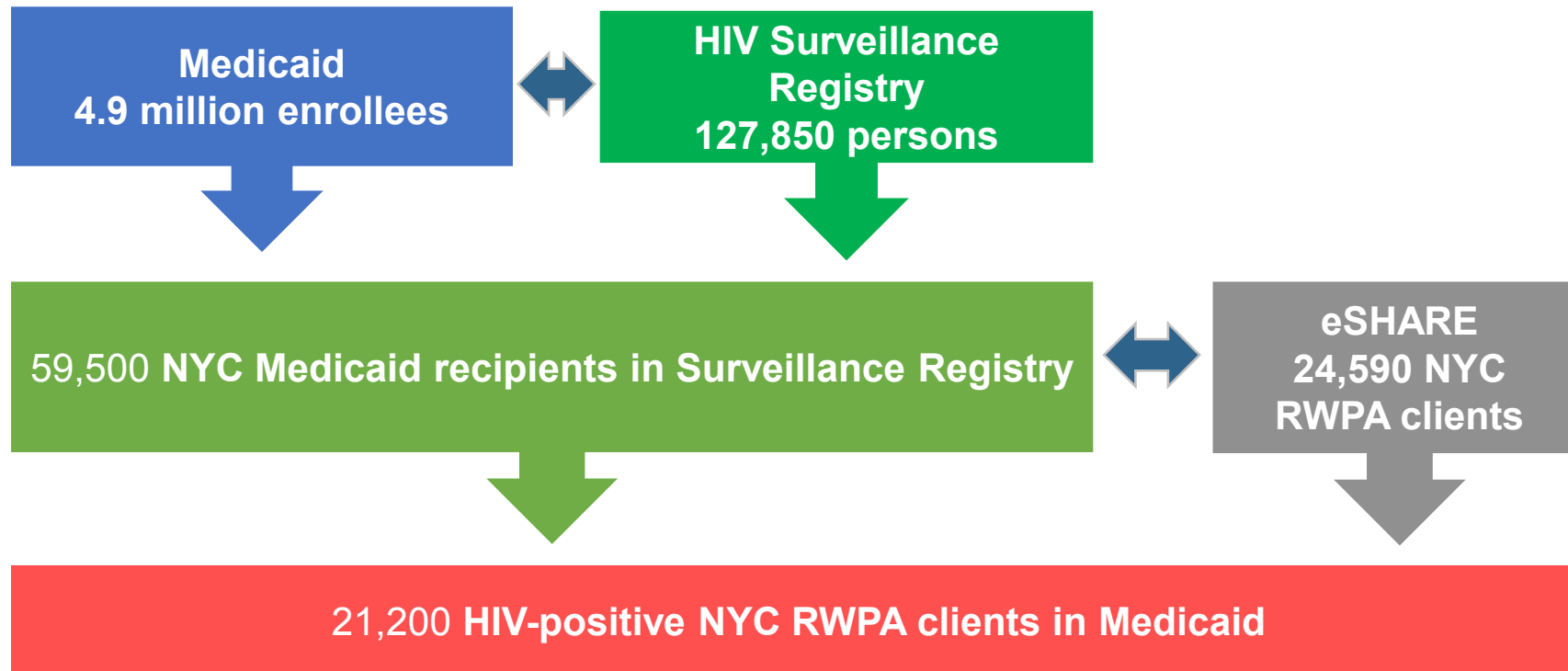
Examples of matching keys
Full LAST NAME + first 6 letters of FIRST NAME + full DATE of BIRTH (DOB)
First letter of LAST NAME + letters 3-10 of LAST NAME + letters 2-9 of FIRST NAME + full DOB

Medicaid-eHARS and eSHARE Match Results

○ Initial match of NYC Medicaid (enrolled 01/2012 – 12/2014) and HIV Registry (PLWH alive as of 01/01/2012 , diagnosed and reported by 12/31/2015) with eSHARE (served 01/2012 – 12/2014) shows:

Medicaid 4.9 million enrollees ↔ **HIV Surveillance Registry 127,850 persons**

59,500 NYC Medicaid recipients in Surveillance Registry ↔ **eSHARE 24,590 NYC RWPA clients**

21,200 HIV-positive NYC RWPA clients in Medicaid

Note: This analysis was performed by DOHMH and the conclusions are those of DOHMH and not necessarily of the New York State Department of Health (NYSDOH).

Application: Overlap of Populations Retained in Care, 2012-2014

HIV Patients Retained† in Care in NYC
(NYC HIV Registry: ~77,800)

Retained HIV Patients Enrolled in Medicaid in NYC
(NYC Salient: ~47,500)

Retained RWPA PLWH in NYC
(eSHARE: ~22,000)

Retained *dually* enrolled (RWPA/Medicaid) PLWH in NYC
(eSHARE-Salient: ~18,900)
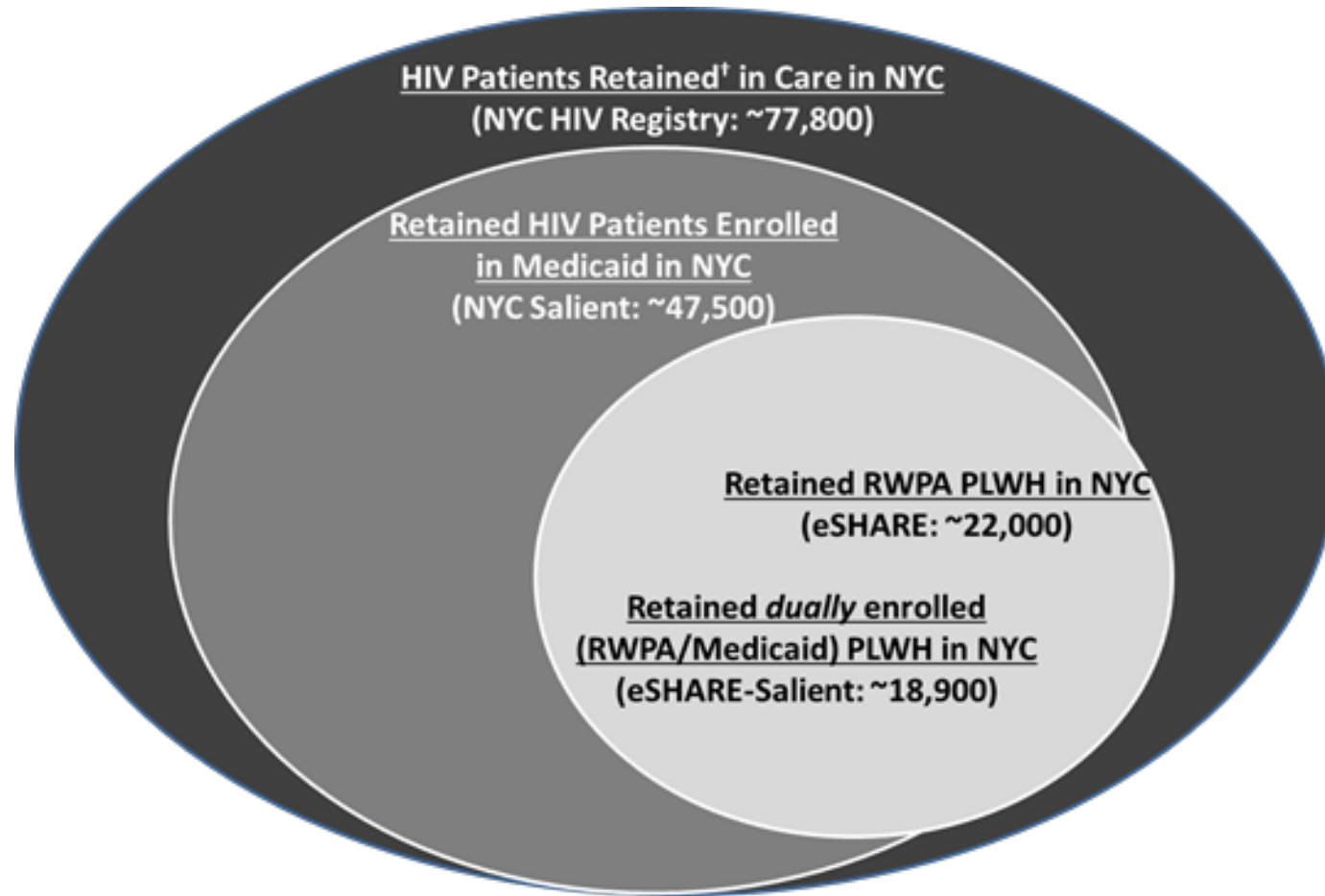
Ɨ Having evidence of at least two HIV care visits at least 3 months apart during a 12-month period.

Note: This analysis was performed by NYC DOHMH and the conclusions are those of DOHMH and not necessarily of the NYSDOH.

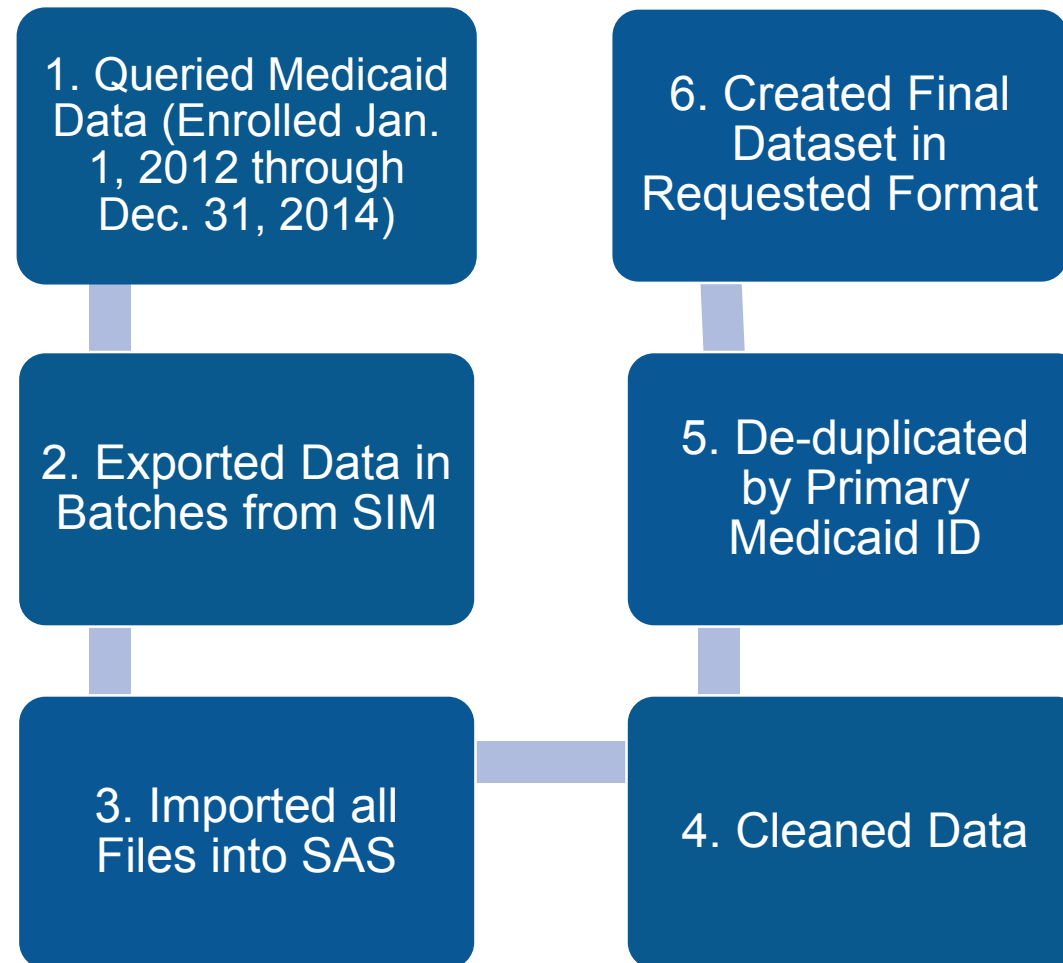# Application (cont.): Examine Fuller Picture of Public Services Received to Support HIV-related Health

- o Compare service needs and service utilization among HIV-positive transgender women, cisgender women and men who have sex with men – by service area (e.g., behavioral-health) and *across payers*

- o Assess the impact of specific packages/combinations of health services (with comparisons of Ryan White only, Ryan White plus Medicaid, and Medicaid only) on HIV care continuum outcomes

- o Estimate uptake of PrEP among HIV-negative Medicaid enrollees using diagnosis data from eHARS with prescription data from the SIM

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Steps Used to Prepare Pre-Match File

1. Queried Medicaid Data (Enrolled Jan. 1, 2012 through Dec. 31, 2014)

2. Exported Data in Batches from SIM

3. Imported all Files into SAS

4. Cleaned Data

5. De-duplicated by Primary Medicaid ID

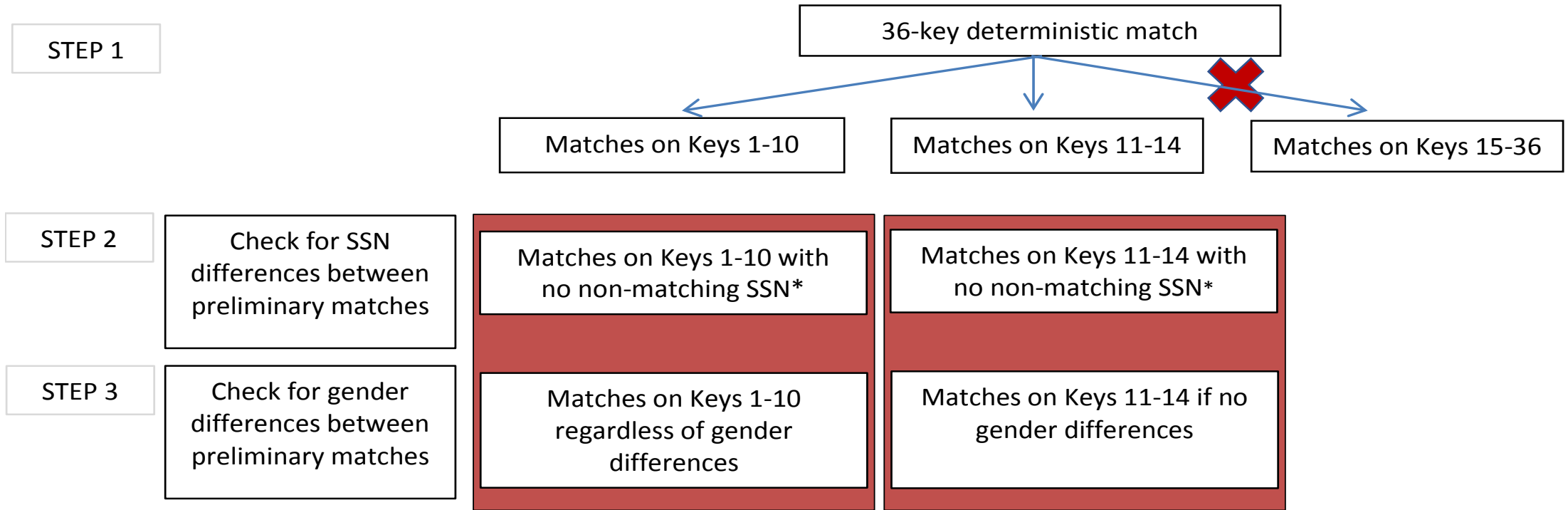6. Created Final Dataset in Requested Format

Data Matching Process

o Deterministic matching process
  • Comparison of unique identifiers

o Used a set of 36 keys based on combinations of first name, last name, date of birth and social security number
  • Starting with key 1, each Medicaid record was compared to each eHARS record
    ➢ If it was a match, the second record was compared against all records in eHARS using key 1. If not, it was evaluated on subsequent keys until it was determined to be a match or not.

    ➢ This process was repeated until the last set of Medicaid and eHARS records were compared.

Matching Keys	Description
1	Full LAST NAME + first 6 letters of FIRST NAME + full DATE of BIRTH (DOB)
2	First letter of LAST NAME + letters 3-10 of LAST NAME + letters 2-9 of FIRST NAME + full DOB
3	Letters 2-7 of LAST NAME + first 6 letters of FIRST NAME + full DOB
4	First 2 letters of LAST NAME + first 3 letters of FIRST NAME + full SOCIAL SECURITY NUMBER (SSN) + full DOB
5	Full LAST NAME + first 3 letters of FIRST NAME + full DOB
6	Letters 3-5 of LAST NAME + first 3 letters of FIRST NAME + full DOB
7	First 4 letters of LAST NAME + first 4 letters of FIRST NAME + full DOB
8	First letter of LAST NAME + letters 3-10 of LAST NAME + letters 2-9 of FIRST NAME + month and year of DOB
9	First letter of LAST NAME + letters 3-10 of LAST NAME + letters 2-9 of FIRST NAME + day and year of DOB
10	Full 8 digits of SSN
11	First 5 letters of LAST NAME + first 4 letters of FIRST NAME + month and year of DOB
12	First 3 letters of LAST NAME + first 3 letters of FIRST NAME + month and year of DOB, switching the first and last name
13	First 3 letters of LAST NAME + first 3 letters of FIRST NAME + day and year of DOB, switching the first and last name
14	First 4 letters of LAST NAME + first 4 letters of FIRST NAME + month and day of DOB, switching the first and last name

Summary of Medicaid-eHARS Matches

STEP 1

36-key deterministic match

Matches on Keys 1-10 | Matches on Keys 11-14 | Matches on Keys 15-36

STEP 2 — Check for SSN differences between preliminary matches

Matches on Keys 1-10 with no non-matching SSN* | Matches on Keys 11-14 with no non-matching SSN*

STEP 3 — Check for gender differences between preliminary matches

Matches on Keys 1-10 regardless of gender differences | Matches on Keys 11-14 if no gender differences

*Non-matching SSNs are those with >4 digits different from one non-missing SSN to another non-missing SSN.

Indicates confirmed matches

NYC Health