Attendees: Dwayne Aaron, CIVHC; Sandra Arreola, CCMCN; Tanya Aultman-Bettridge, Triwest; Mark Brittan, Children's Colorado; Christine Buttorff, RAND; Leanne Candura, HSRI; Eddy Costa, CIVHC; Maria de Jesus Diaz Perez; CIVHC; Tim Dittmer, Triwest; Nathan Drashner, Health Tech Solutions; Cari Frank, CIVHC; Mark Gritz, University of Colorado School of Medicine; David Keller, University of Colorado; Faye Liang, Cancer Center; Dan Lindbergh, University of Colorado; Paul McCormick, CIVHC; Katie Oberg, CIVHC; Erin Anne Perry, CIVHC; Pete Sheehan, CIVHC; Stephanie Spriggs, CIVHC; Sharon Ulery, HSRI; Eric Unger, DOI; Asa Wilks, RAND; Sruthi Yekkaluri; Cancer Center

(Please refer to February presentation and December meeting notes for additional information)

Meeting Format Note

The December 2019 and February 2020 meetings formatted differently than in the past. The December meeting was primarily comprised of users sharing experiences with CO APCD data rather than a presentation. CIVHC was available to answer very high-level questions but was asked to listen to the user experiences and address the questions posed during the following (February) User Group meeting. In February, CIVHC gave the presentation below and answered additional questions:

What is a Finder File?

- Contains identifying information about a cohort (e.g. name, date of birth, SSN, Medicaid ID, etc.) for a researcher seeking CO APCD data.
- Researcher sends file for CIVHC to match individuals listed in the cohort to individuals from the CO APCD as closely as possible.
- CIVHC then releases matched eligibility and claims information back to the researcher.

User Experience: Health Data Compass (HDC)

HDC Overview

- Receives CO APCD data set with Limited Identifying information from CIVHC that includes medical and pharmacy claims, as well as provider and eligibility data.

HDC Matching Process

- HDC provides CIVHC with finder file of patients from UC Health and Children's Hospital with demographic information and medical record numbers (MRN).
- CIVHC sends back medical and pharmacy claims data for commercial, Medicaid and Medicare Advantage payers for the matching patients from 2012 through August 2019.

HDC Challenges

- Matching the MRN from HDC systems to the member composite ID from the CO APCD.
- Ideally, should be a 1:1 match.
- Occasionally (13%), one MRN equals two or more member composite IDs.
- Sometimes one member composite ID equals two MRNs.
- In the last file, over 3.8 million medical record numbers were sent with the match rate of 70%.
- Match of member composite IDs to medical claims header was 54%.

User Experience: University of Colorado (CU)

CU Overview

- Study impact of patient navigation on advanced care planning and palliative care outcomes in Latinos with advanced illness.

CU Matching Process

- Use CO APCD to perform a cost analysis of patient navigation compared to usual care.
- Submitted finder file for small test run of a portion of population with the bare minimum of identifiers.
- The identifying information was challenging to supply; much of the population is undocumented.

CU Challenges

- The process to upload the finder file was difficult with numerous passwords and a bit cumbersome as a new user.
- The two separate data request applications are confusing.

CIVHC Finder File Process

Items requested

- Client-specified Unique Identifier
- Social Security Number
- Medicaid ID
- First Name
- Last Name
- Date of Birth

Process

1. Medicaid ID and Date of Birth; if no match, then
2. Medicaid ID and Name (First Initial, Last Name); if no match, then
3. SSN and Date of Birth; if no match, then
4. Cleansed Name (Cleansed First Name, Cleansed Last Name i.e., remove prefix, suffix, etc.) and Date of Birth
- Once a match is made on any of the above steps, subsequent matching steps are bypassed and the client match is recorded.

Analysis of HDC Finder File Matching - CIVHC

Match MRN to more than one-member composite ID

   - Examined sample; most involved Medicaid members with eligibility in Medicaid FFS and Managed Care.
   - Same name and DOB but different addresses and different member composite ID
- 70% member match; percentage match by rule
- Most member matches occur with application of last (fourth) rule, which may produce some errors (false positive matches).
- 70% member match; matched vs. unmatched members
   - Unmatched members have fewer identifiers available to match on and are more likely to live outside of Colorado.

- 70% match includes members with dental and Medicare supplemental benefits eligibility, which should be excluded
- 54% member to medical claims match
  - Actually, closer to 89% if based on matched, not total number of members
  - Not 100% in part because members included those with dental and Medicare supplemental benefits and eligibility, but without corresponding claims

Two MRNs identify same individual (i.e., two MRNs match one member composite ID)

- Initial examination found single member composite ID matched two different MRNs from the finder file
- Same person but with two different unique MRNs. One that started with "CHCO" and the other "UCHealth"; both had the same Medicaid ID, DOB, and name
- Appears to occur when a patient is identified in the pediatric hospital with one MRN and then, later, in the adult hospital with a different MRN

Gaps in Current Matching Process - CIVHC

- Instructions for uploading finder file confusing
  - Instructions updated and improved with enhanced step-by-step details and illustrations
- Two data request applications
  - Being addressed as part of application process redesign
- No formal pre-assessment of finder file to evaluate completeness and standardize format of identifiers
- More than one member composite ID, mostly for Medicaid members
- Possible false positive matches with fourth matching rule, which uses combination of DOB and name
- Unintentional inclusion of dental and Medicare supplemental benefits eligibility match
- Few person identifiers used in matching; additional identifiers could be beneficial
- No ability to conduct "fuzzy match" on names and addresses with current tools (e.g. matching names with different spellings, Katherine vs, Catherine)

Next Steps – CIVHC

- Establish formal pre-assessment of finder file to identify problems for resolution
  - Verify record counts
  - Check for uniqueness of client member ID
  - Check for missing identifiers
  - Check format of each identifier (e.g., DOB) and standardize
  - Communicate results to client
- Examine Medicaid eligibility data to determine if new rules can be established to combine member composite ID
- Exclude dental and Medicare supplemental benefits eligibility when not relevant
- Began working with researcher in linking health care data sets from CU Denver
  - Initial assessment of match rate for Health Data Compass was deemed favorable
  - Improvements possible by introducing probabilistic matching