ARKANSAS APCD DATA USERS GROUP

04.28.2020

ACHI
INSPIRING HEALTHY ACTS

AGENDA

o Welcome

o Topics
  o APCD Unique ID Collision Reduction Methodology
  o Medicare Advantage Record Identification
  o Patient to Provider Attribution Methodology
  o Qualified Health Plans by Income Strata
  o Latest APCD Release Information and Data Tips

o Questions/Discussion

ARKANSAS APCD TEAM

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o Nichole Sanders, PhD – Assistant Director of Analytics, ACHI

o Mike Motley, MPH, Director of Analytics, ACHI

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APCD COLLISION REDUCTION METHODOLOGY

o An APCD Unique ID – or Hash ID – is a 'hashed' value representing the concatenated member last name and date of birth

o Combining the Hash ID with gender can be used as a proxy to identify a unique individual – when supported by other information

o The purpose of this methodology is to determine a close approximation of the number of distinct individuals in a study population using a combination of gender and Hash ID

APCD COLLISION REDUCTION METHODOLOGY

o Because the Hash ID is created from last name and date of birth only, there are situations where different members can have the same Hash ID

o 'Collisions' occur when different members with the same gender receive the same Hash ID

Example: StudyID – Hash ID (ME992) = '123456789XYZ' || Gender (ME013) = 'M'

Individual	Submitting Entity (ME001) (SE_ID)	Member ID (ME107)	Enroll Date (ME162A)	Dis-enroll Date (ME162A)
1	12231	H89aJD5503	8/29/2013	12/31/2013
1	95448A	64672027e8e	1/1/2014	12/31/2014
1	95448A	64672027e8e	1/1/2015	12/31/2015
1	95448A	64672027e8e	1/1/2016	12/31/2017
1	95448A	ux8BD6WQX	1/1/2018	12/31/2018
1	79413A	116174576	1/1/2019	12/31/9999
2	83470	4817410000	8/1/2017	12/31/2018
2	83470	4817410000	1/1/2019	3/31/2019
3	83470	415810000	11/1/2015	7/31/2018
3	83470	43600000	8/1/2018	7/31/2019

- These 10 member records have the same gender and Hash ID

- They are found across 4 submitting entities with 7 different member IDs

This group was segmented to contain the coverage type Commercial only.

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Individual	Submitting Entity (ME001) (SE_ID)	Member ID (ME107)	Enroll Date (ME162A)	Dis-enroll Date (ME162A)	Policy Number (ME006)	Contract Number (ME009)	Group Name (ME032)
1	12231	H89aJD5503	8/29/2013	12/31/2013	8H901	JD5503628	PIKE COUNTY
1	95448A	64672027e8e	1/1/2014	12/31/2014	160437	NULL	Pike County
1	95448A	64672027e8e	1/1/2015	12/31/2015	160437	NULL	Pike County
1	95448A	64672027e8e	1/1/2016	12/31/2017	160437	NULL	Pike County
1	95448A	ux8BD6WQX	1/1/2018	12/31/2018	160437	NULL	Pike County
1	79413A	116174576	1/1/2019	12/31/9999	XF92000009	XF92000009	PIKE COUNTY
2	83470	4817410000	8/1/2017	12/31/2018	SX7D12B-L	BY3Wa9827	ABCBS SILVER AW1
2	83470	4817410000	1/1/2019	3/31/2019	72002G9213	86326X	ABCBS SILVER AW1
3	83470	415810000	11/1/2015	7/31/2018	19464606	19464606	SOUTHERN RAIL COMPANY
3	83470	43600000	8/1/2018	7/31/2019	1946460000	1946460000	SOUTHERN RAIL COMPANY

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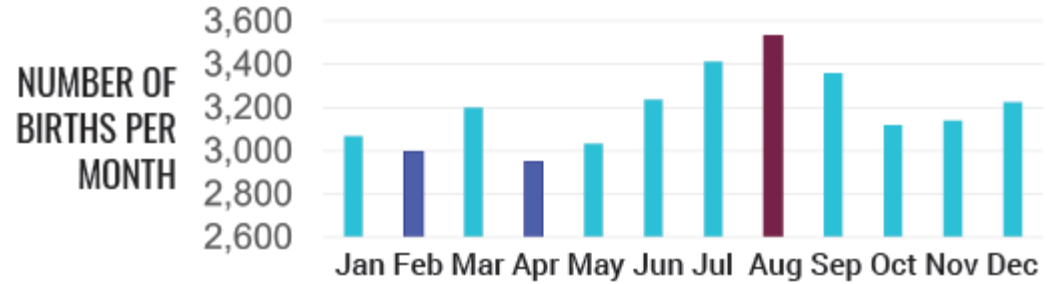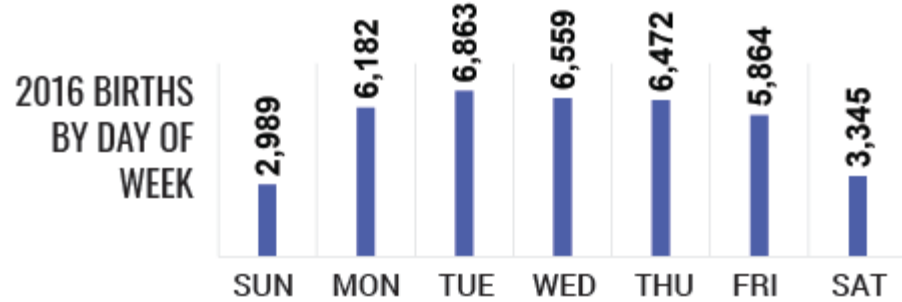This group was segmented to contain the coverage type Commercial only.

COLLISION PREVALENCE

o The collision rate in a randomly created analytic set is expected to be around **3.5%** and potentially lower for a smaller set size

o Collision influencers
  o Twins: there is about 1 to 3% rate of twins
  o Common last names over time
  o Common dates of birth within groups or years
  o Data quality errors

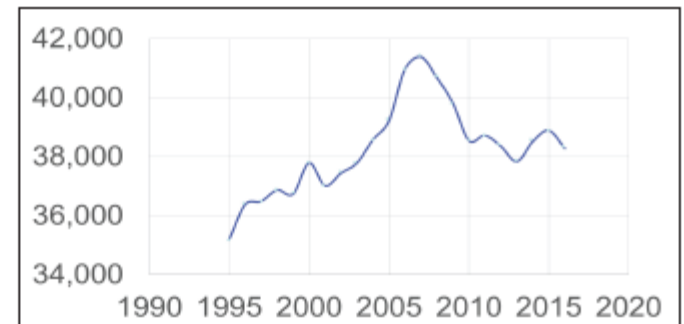*Collision rates can vary depending on the size and design of the analytic dataset.*
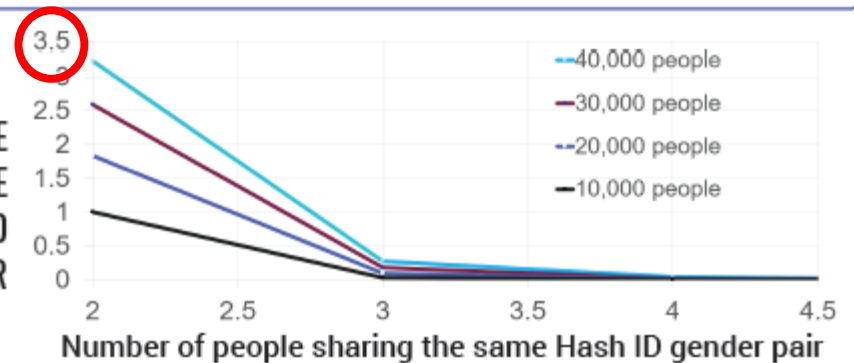
Collision Rate Model and Results

2016 BIRTHS BY DAY OF WEEK

SUN	2,989
MON	6,182
TUE	6,863
WED	6,559
THU	6,472
FRI	5,864
SAT	3,345

NUMBER OF BIRTHS PER MONTH

DIVERSIFICATION OF LAST NAMES

1990		2015	
Last Name	Rate (%)	Last Name	Rate (%)
SMITH	1.6	SMITH	1.2
WILLIAMS	1.2	WILLIAMS	1.0
JOHNSON	1.1	JOHNSON	0.9
JONES	1.1	DAVIS	0.8

NUMBER OF BIRTHS IN ARKANSAS

EXPECTED RATE OF NON-UNIQUE HASH ID GENDER PAIR

- 40,000 people
- 30,000 people
- 20,000 people
- 10,000 people

Number of people sharing the same Hash ID gender pair

Collision rates can vary depending on the size and design of the analytic dataset.

COLLISION MANAGEMENT

o Collision reduction can be managed in several ways including:

1. Analytic datasets focused on rare or specialized conditions are typically small and often don't include collisions, so collision reduction steps are not usually required

2. Records associated with collisions within large analytic datasets focused on common conditions could be omitted and still maintain a viable analytic dataset

3. If collisions are problematic in an analytic dataset, applying a *collision reduction methodology* is recommended

APCD COLLISION REDUCTION METHODOLOGY

o To mitigate this situation, two identifiers are created – one based on the member ID and one based on the Hash ID:

- o SE_ID = ME001||ME107 (Submitting entity + member ID)

  - o The variables making up SE_ID can also be made from the medical claims, pharmacy claims, and dental claims data

- o StudyID = ME998||ME013 (Hash ID + gender)

  - o This variable can only be developed from the member table

o A single StudyID can have multiple different SE_ID values

APCD COLLISION REDUCTION METHODOLOGY

APCD COLLISION REDUCTION METHODOLOGY

o Data preparation for collision reduction
  o Divide the enrollment records into different types of coverage
    o Commercial (excluding Medicare Advantage Plans)
    o Medicare Advantage plans
    o Medicaid
    o Dental and pharmacy plans together
  o Create SE_ID for within coverage type (e.g. ME001||ME107)
  o Assign one StudyID to each SE_ID based on most recent record using enrollment date
    o In the example, had StudyIDs not been created separately for each payer, all records associated with StudyID = "BF" would have been dropped

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IDENTIFYING MEDICARE ADVANTAGE PLANS

o Some projects require identifying the Medicare Advantage population specifically for inclusion or exclusion

o The best way to identify Medicare Advantage plans in the Arkansas APCD member data is to segment on Insurance Product Type (ME003)

  o When ME003 = 'HN','HS','MA','MB','MD','MDV','MH','MHO','MI','MPO'

  o Be sure to apply collision reduction methodology to the members pulled for these analyses

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PATIENT TO PROVIDER ATTRIBUTION METHODOLOGY

- Patient attribution is a process of assigning patients to a single provider based on their utilization of primary care services

- Commonly used to establish a denominator of patients for which a provider is deemed responsible, for quality measurement, value-based payment models, etc.

- CMS has developed and published attribution methods for Medicare beneficiaries

- Arkansas Medicaid and Arkansas Blue Cross Blue Shield have also developed tailored attribution methods
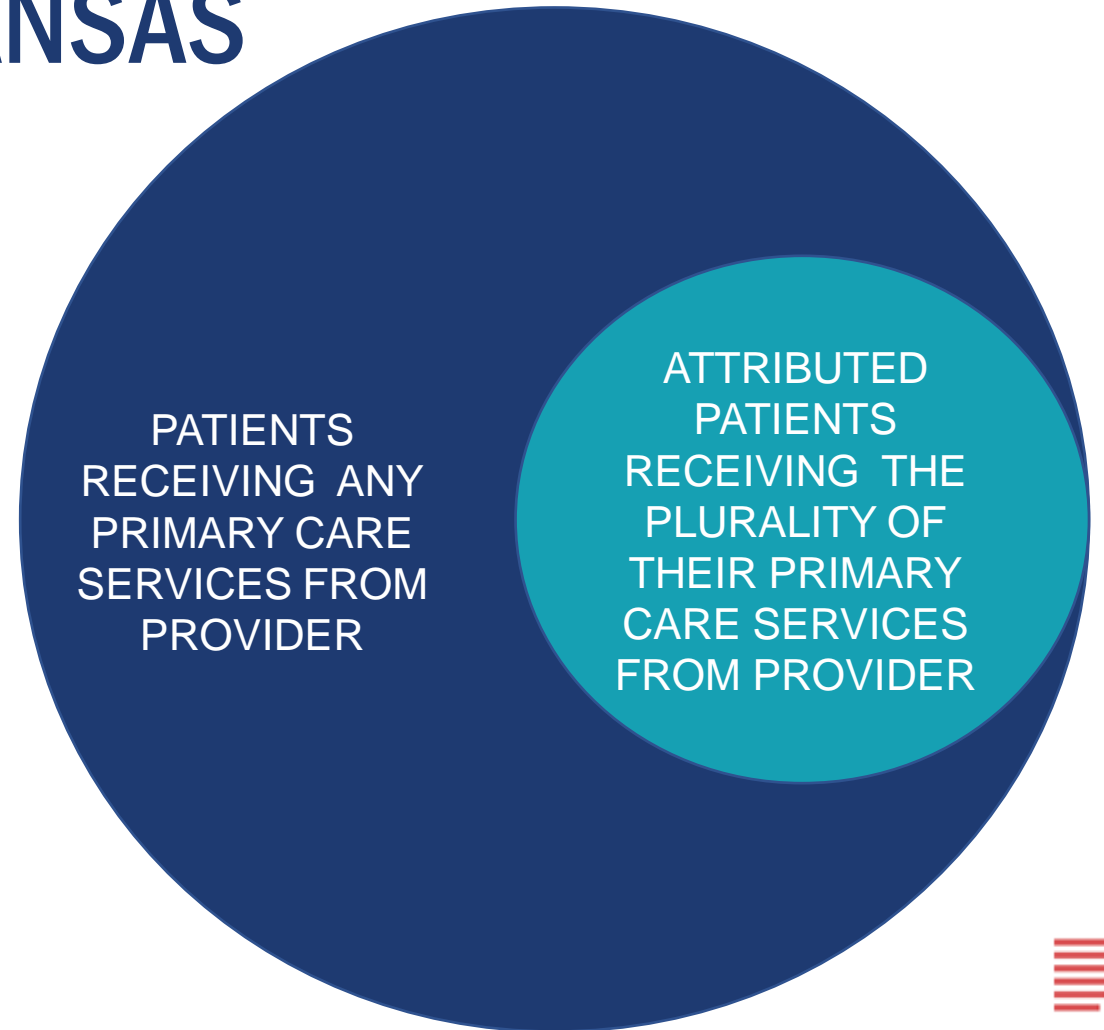
PATIENT TO PROVIDER ATTRIBUTION METHODOLOGY

o A method adapted by ACHI begins with selecting individual providers, based on National Provider Identifier (NPI) number

o Claims associated with these NPI numbers are then extracted to determine unique patients that have received any primary care services from the selected providers within a measurement period

o Once patients with any contact are determined, those receiving a plurality of their primary care services from a given provider are attributed to that provider

PATIENT TO PROVIDER ATTRIBUTION: COMMUNITY HEALTH CENTERS OF ARKANSAS

1. Confirmed providers and NPI numbers with CHCA Administrators

2. Extract claims for evaluation and management (CPT codes) and well care visits (ICD9/ ICD10 Codes) performed by those providers

3. Determine which unique patients received a plurality of those services from the selected provider(s) during measurement period

PATIENTS RECEIVING ANY PRIMARY CARE SERVICES FROM PROVIDER

ATTRIBUTED PATIENTS RECEIVING THE PLURALITY OF THEIR PRIMARY CARE SERVICES FROM PROVIDER

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QUALIFIED HEALTH PLANS BY INCOME STRATA

o FPL distinction information is contained within the **HIOS ID (ME992)** found on the member record of individuals enrolled in qualified health plans (QHP)

o The HIOS ID modifier (the last two digits in the HIOS ID) describes FPL distinction:

Example: 70525AR007004101, 70525AR007003702

The **HIOS ID** is a 16-byte identifier representing submitting entities within the Health Insurance Oversight System, the federal government's primary data collection vehicle for the health insurance 'Exchanges' Marketplaces.

QUALIFIED HEALTH PLANS BY INCOME STRATA

HIOS ID Modifiers and Descriptions

Modifier	%FPL or Cost Sharing Variant Values
00	Non-Exchange Variant
01	Exchange Variant – Above 250% FPL
02	Zero Cost Sharing Plan Variation
03	Limited Cost Sharing Plan Variation
04	201-250% FPL
05	151-200% FPL
06	139-150% FPL
32	101-138% FPL (Arkansas Works Program)
36	0-100% FPL (Arkansas Works Program)

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RELEASE INFORMATION

o The latest Arkansas APCD release: March 1, 2020

o Data coverage: Jan. 1, 2013, through Sept. 30, 2019

o Review the Arkansas APCD Tips and Issues page for data coverage

o The Arkansas APCD Infographic provides a useful summary:

https://www.arkansasapcd.net/Docs/255/

RELEASE INFORMATION

The latest Arkansas APCD release available to data requesters

Source	Coverage *
Fully Insured Commercial Data	September 30, 2019
ADH Birth/Death Data	Dec. 31, 2018
ADH Hospital Discharge (for uninsured)	Dec. 31, 2018
ADH Emergency Dept. (for uninsured)	Dec. 31, 2018
Cancer Registry	Dec. 31, 2016
Arkansas Medicaid	June 30, 2019
Arkansas Medicare	Dec. 31, 2017
Arkansas Workers Compensation	June 30, 2019
Arkansas Medical Marijuana Cardholders	August, 2018-March, 2020

*Data coverage begins on January 1, 2013

RELEASE INFORMATION

Submitting entities *excluded* from this refresh because of data quality issues:

ME001	Submitting Entity	Estimated Members – All Years
95885, 12151, 73288	Humana	608,552
79413B	United Healthcare B	40,644
64246	Guardian	68,405
62286A	Golden Rule	6,049

Submitting entities previously excluded because of data quality issues *but are now included*:

ME001	Submitting Entity	Estimated Members – All Years
16244	Empower Healthcare (PASSE)	23,192
16256	Arkansas Total Care (PASSE)	13,365
79413A	United Healthcare Company A	250,280
80578	Physicians Healthcare	8,592
95446	United Healthcare of Arkansas	28,379

RELEASE INFORMATION

o New Member data pull criteria

  o The Arkansas APCD team has changed the way the member data can be pulled

  o The Arkansas APCD team added a process to identify the final 'version' of a member/enrollment record

  o This aids the data requester by removing the need to find the latest member records to understand enrollment periods, calculate member months, etc.

  o The member/enrollment record version rank methodology is here: https://www.arkansasapcd.net/Docs/1375/

DATA TIPS

o Utilize the searchable Arkansas APCD [data dictionaries](data-dictionaries) and [tip sheets](tip-sheets)

o Highlights (be sure to review them all!):

   o Identifying test TPA member data for exclusion in SE 95442 for 99EBD1

   o Finding birth year for Arkansas Medicare beneficiaries

   o Merged submitters and how to link their data

   o Identifying Medicare Advantage Plans