



# Hawai'i Health Data Center:

## *All-Payer Claims Database*

Presentation to the State Epidemiological Outcomes Workgroup (SEOW)  
November 13, 2020



# Overview

- APCDs
- National Landscape
- Hawai'i APCD
- APCDs and SUD Data
- Example Use Cases

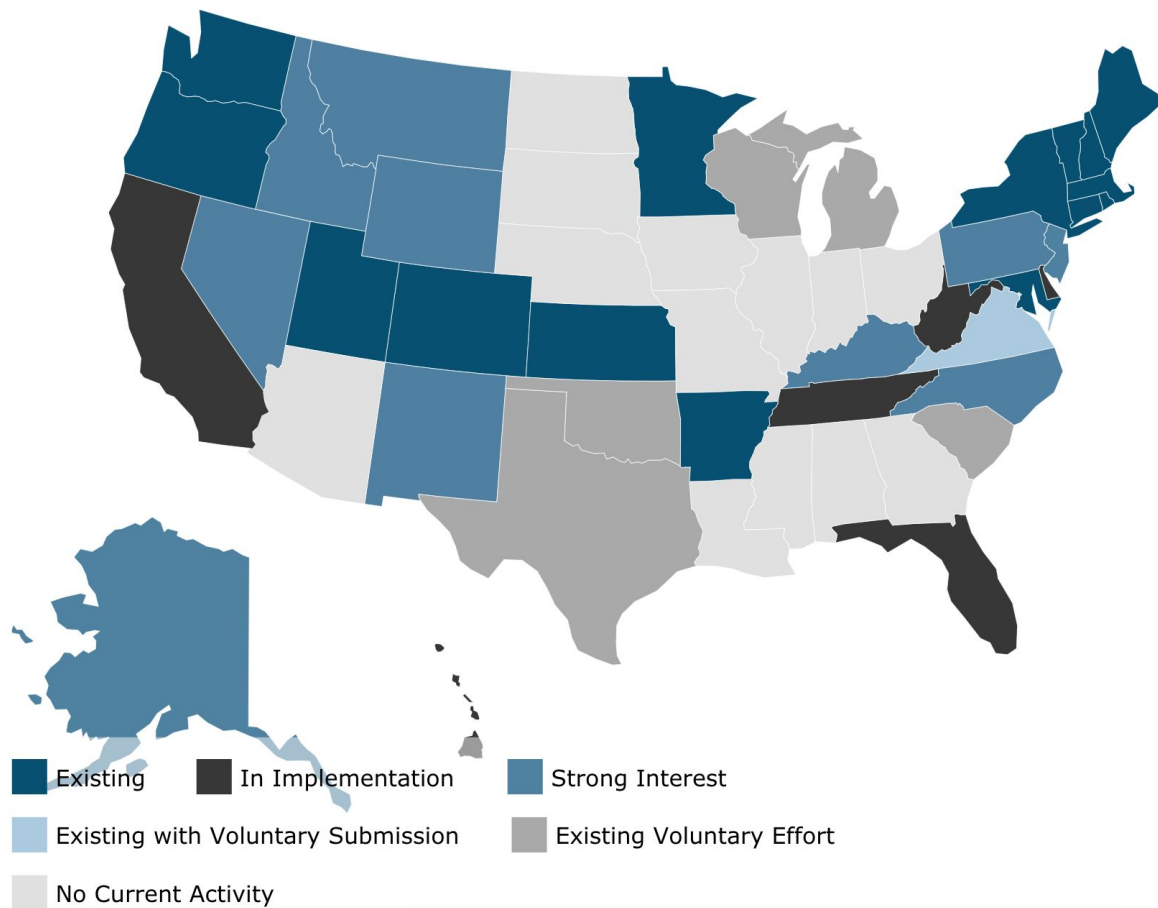


# All-Payer Claims Databases (APCDs)

- Large-scale databases that collect data derived from eligibility files, medical claims, pharmacy claims, dental claims, and provider files
- In many States, APCDs are initiated via legislative mandate, while some States operate APCDs as voluntary efforts

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# *National Landscape*





## Value of APCDs

- Understanding healthcare costs and expenditures
- Increased transparency in healthcare
- Tool for measurement of key metrics
- Measure impact of healthcare system changes
- Drive policy changes and healthcare improvement

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*Hawai'i APCD*



# Hawai'i APCD

- Partnership between the State Health Planning and Development Agency (SHPDA), State of Hawai'i Med-QUEST (Medicaid), and University of Hawai'i
- Authorized to collect data from:
  - Med-QUEST Division (Medicaid) - Act 139 (16)
  - Employer-Union Health Benefits Trust Fund (EUTF) and its plans - Act 139 (16)
  - Medicare FFS - Act 139 (16)
  - Medicare Advantage Plans - Act 088 (19)
- Currently collecting data from:
  - Employer-Union Health Benefits Trust Fund (EUTF) and its plans (Quarterly)
  - Medicare FFS (~Annually)





# HHDC APCD Data Submission Guide v1.0

State Health Planning & Development Agency  
State of Hawai'i All-Payer Claims Database

## DATA SUBMISSION GUIDE

March 17, 2018

Version 1.0



State of Hawai'i  
State Health Planning & Development Agency

1177 Alakea Street, Suite 402  
Honolulu, HI 96813  
<http://health.hawaii.gov/digda/>

Data Element ID	Data Element Name	Type	Format	Length	Description	Required	Threshold
MC053	Other Diagnosis - 12	Text - External Code Source	varchar	7	Other ICD Diagnosis Code - 12. Report the twelfth secondary ICD Diagnosis Code. If not applicable do not report any value here. Do not code decimal point. See External Code Source.	Required when present	1%
MC054	Revenue Code	Integer - External Code Source	int	4	Revenue Code. Report the valid National Uniform Billing Committee Revenue Code. Code using leading zeroes, left-justified, and four digits. See External Code Source.	Required when MC094 = 002	100%
MC055	Procedure Code	Text - External Code Source	varchar	5	HCPCS / CPT Code. Report a valid Procedure code for the claim line as defined by MC130. See External Code Source.	Required	100%
MC056	Procedure Modifier - 1	Text - External Code Source	char	2	HCPCS / CPT Code Modifier - 1. Report a valid procedure modifier indicating that a service or procedure (MC055) has been altered by some specific circumstance but has not been changed in its definition or code. See External Code Source.	Required	20%
MC057	Procedure Modifier - 2	Text - External Code Source	char	2	HCPCS / CPT Code Modifier - 2. Report a valid procedure modifier indicating that a service or procedure (MC055) has been altered by some specific circumstance but has not been changed in its definition or code. See External Code Source.	Required	2%
MC058	ICD Principal Procedure Code	Text - External Code Source	varchar	7	ICD Principal Procedure Code. Report the Principal ICD Procedure Code for inpatient claims. Repeat this code on all lines of the inpatient claim it is applicable to. Do not code decimal point. See External Code Source.	Required when MC094 = 002 and MC036 = 11, 18, 21, 28, 41, 65, 66, 84, 86, or 89	55%
MC059	Date of Service - From	Date - Integer	int	8	Date of Service - From. Report the first date of service for the claim line in CCYYMMDD format.	Required	100%
MC060	Date of Service - Thru	Date - Integer	int	8	Date of Service - Thru. Report the last date of service for the claim line in CCYYMMDD format. For inpatient claims, the room and board line may or may not be equal to the discharge date. Procedures delivered during a visit should indicate which date they occurred.	Required	100%
MC061	Quantity	Quantity - Integer	±varchar	15	Count of Services. Report the count of services / units performed. Use decimals when appropriate.	Required	100%



# General Claims Information Collected

- Subscriber and member information
- Health plan information
- Diagnosis codes
- Service or procedure codes
- Facility information
- Provider information
- Date(s) of service
- Charges and Payments
  - Patient responsibility (deductible, copay, coinsurance)
  - Charge amount
  - Paid amount
  - Other payments (coordination of benefits, secondary or tertiary payers)



# Project Authorities

- **Act 139 (16):** Authorized SHPDA to collect state-funded administrative healthcare data from Medicare, Med-QUEST (Medicaid) and the Hawaii Employer-Union Health Benefits Trust Fund (EUTF), designates the University of Hawai'i - TASI/PHIDC as SHPDA's data center partner.
- **Interim Administrative Rules (HAR §11-188):** General Provisions; Data Governance; Data Submission; Data Use and Reporting; Information Security, Data Privacy, and Confidentiality Protection.
- **Act 55 (18):** Establishes the Health Analytics Program (now known as the Health Analytics Office, HAO) in the Med-QUEST Division of the Department of Human Services (DHS) and continues the support of the APCD activities in collaboration with SHPDA, DOH, DCCA, Hawai'i EUTF, and the University of Hawai'i. Utilizing the authority of SHPDA, this bill allows for the continued support and operational maintenance of the APCD.



## Hawai'i APCD Goals

- **HAR §11-188-4 Goals.** (1) Promote the use of claims data to enable studies on the cost and quality of care, population health, health disparities, consumer transparency in the cost and quality of health care, health care planning, and to inform public policy
- **HAR §11-188-4 Goals.** (5) Increase transparency and accountability to the public and policymakers by providing access to relevant information;



# Hawai'i APCD Multi-Year Analytic Objectives

- Establish baseline information for public use and applications for federal and state reporting
- Monitor and analyze healthcare cost
- Assess population health
- Measure utilization of services
- Identify health disparities
- Inform consumers of cost and quality of healthcare
- Support planning and evaluation of healthcare operations and care
- Improve coordination of care
- Enable oversight of health insurance premium medical loss ratios
- Waste, fraud, and abuse studies



## Data Update (As of 10/2020)

1. **EUTF:** Production data from CY 2009 - Q3 2020 (through 8/2020) accepted
2. **CVS Health:** Production data from CY 2013 - Q3 2020 accepted
3. **Hawaii Dental Service:** Production data from CY 2009 - Q3 2020 accepted
4. **Kaiser:** Received Production data from CY 2015 - CY 2019, working with Kaiser to review quality reports
5. **Hawaii Medical Service Association:** Production data from CY 2010 - Q3 2020 accepted
6. **VSP Vision Care:** Received Production data from CY 2017 - Q3 2020, working with VSP to review quality reports, and collect remaining historical data
7. **Medicare Fee-for-Service:** Currently possess 2010-2014 data (old version), submitted request for additional data 2010-2018 data (updated version), pending CMS final approval

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# *APCDs and Substance Use Disorder (SUD) Data*





## 42 CFR Part 2, 2.52 Research

- **2017 42 CFR Part 2 Final Rule:** Disclosures for research under Part 2 are permitted by lawful holders to individuals and organizations who are **either** HIPAA Covered Entities, Business Associates, **or** subject to the Common Rule (re: Research on Human Subjects), subject to conditions
- **2020 42 CFR Part 2 Final Rule:** Disclosures for research under Part 2 are permitted by HIPAA Covered Entities or Business Associates to individuals and organizations who are **neither** HIPAA covered entities, **nor** subject to the Common Rule (re: Research on Human Subjects), subject to conditions.



## Hawai'i APCD and SUD Data

- Have not collected any data under that falls under 42 CFR Part 2 protection (e.g., federally-funded Part 2 programs)
- Have collected some SUD data on facilities and programs that are not under 42 CFR Part 2 protection (e.g., not federally funded programs)
- Once the 2020 42 CFR Part 2 Final Rule is effective, will look to adjust data collection as appropriate, if additional 42 CFR Part 2 SUD data collection is deemed possible
- Pre-2017, CMS redacted all SUD data out of data distributions (Medicare FFS) to States. After the 2017 42 CFR Part 2 Final Rule was effective, CMS stopped redacting SUD claims from its data distributions to States

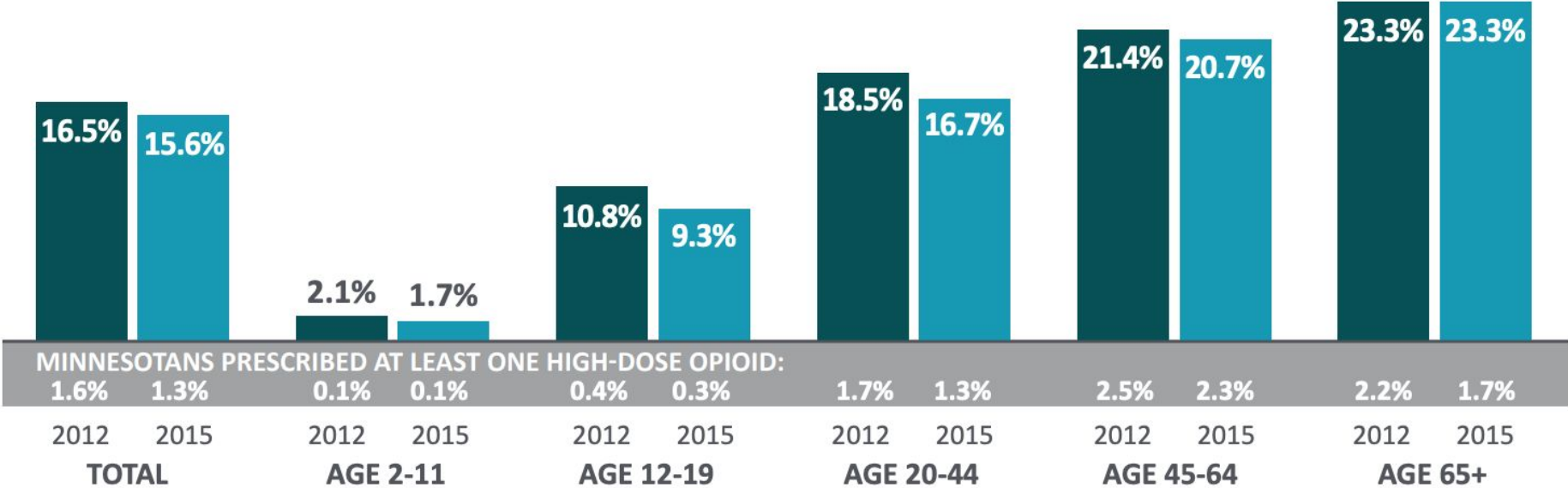
Algorithms	Reference Period (# of Years) <sup>1</sup>	Valid ICD-9/MS DRG/HCPCS Codes	Valid ICD-10 Codes <sup>2</sup>	Number/Type of Claims to Qualify <sup>3</sup>
Alcohol Use Disorders	2 Years	<p>DX 291.0, 291.1, 291.2, 291.3, 291.4, 291.5, 291.8, 291.81, 291.82, 291.89, 291.9, 303.00, 303.01, 303.02, 303.90, 303.91, 303.92, 305.00, 305.01, 305.02, 357.5, 425.5, 535.30, 535.31, 571.0, 571.1, 571.2, 571.3, 760.71, 980.0, V65.42, V79.1, E860.0</p> <p><b>ICD-9 Procedure Codes</b> 94.6, 94.61, 94.62, 94.63, 94.67, 94.68, 94.69</p> <p><b>(any DX or procedure on the claim)</b></p>	<p>DX F10.10, F10.120, F10.121, F10.129, F10.14, F10.150, F10.151, F10.159, F10.180, F10.181, F10.182, F10.188, F10.19, F10.20, F10.220, F10.221, F10.229, F10.230, F10.231, F10.232, F10.239, F10.24, F10.250, F10.251, F10.259, F10.26, F10.27, F10.280, F10.281, F10.282, F10.288, F10.29, F10.920, F10.921, F10.929, F10.94, F10.950, F10.951, F10.959, F10.96, F10.97, F10.980, F10.981, F10.982, F10.988, F10.99, G62.1, I42.6, K29.20, K29.21, K70.0, K70.10, K70.11, K70.2, K70.30, K70.31, K70.40, K70.41, K70.9, P04.3, Q86.0, T51.0X1A, T51.0X2A, T51.0X3A, T51.0X4A, Z71.41, Z71.42</p> <p><b>ICD10 Procedure Codes:</b> HZ2ZZZZ, HZ30ZZZ, HZ31ZZZ, HZ32ZZZ, HZ33ZZZ, HZ34ZZZ, HZ35ZZZ, HZ36ZZZ, HZ37ZZZ, HZ38ZZZ, HZ39ZZZ, HZ3BZZZ, HZ40ZZZ, HZ93ZZZ, HZ96ZZZ <b>(any DX or procedure on the claim)</b></p>	<p>At least one inpatient claim <b>OR</b> two other non-drug claims of any service type during the two-year period</p> <p>Procedure codes require only one claim to qualify</p>

Other Chronic or Potentially Disabling Conditions: Alcohol Use Disorders, 2019 Chronic Condition Data Warehouse (CCW)

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# *SUD/Mental Health Use Cases from Other States*

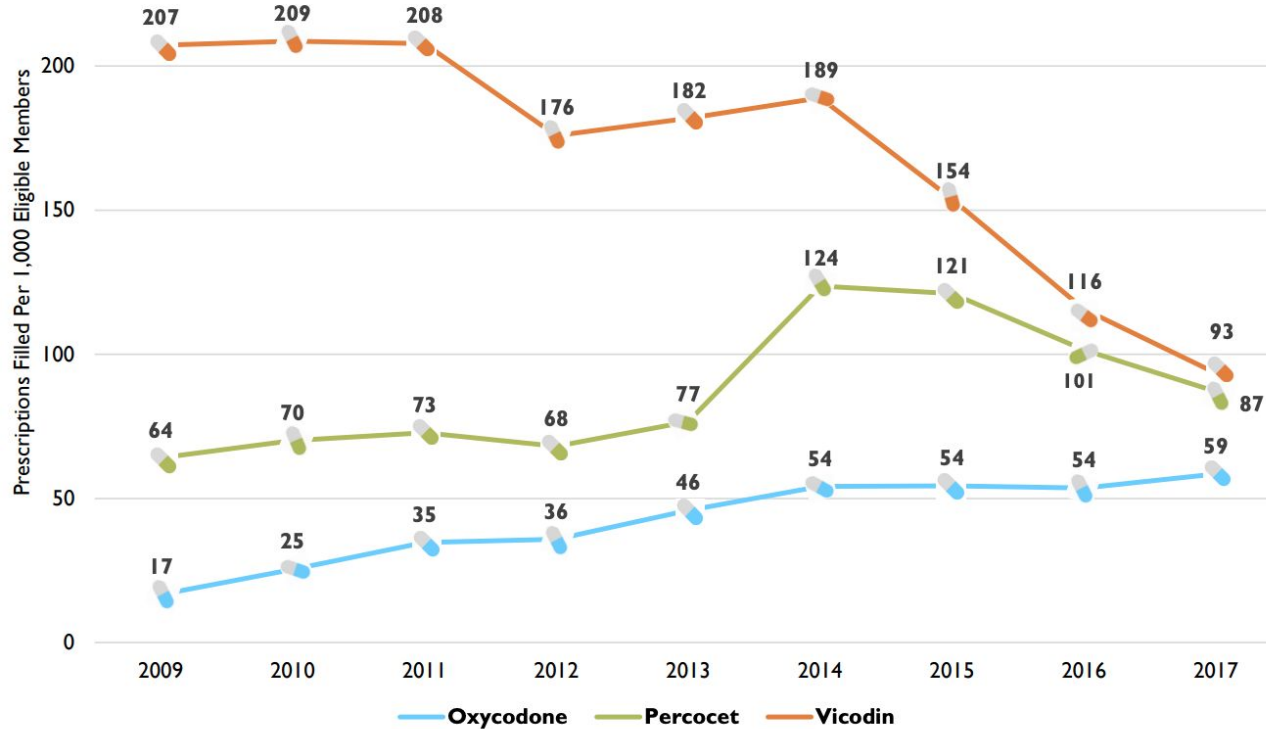
**FIGURE 1: Percentage of covered Minnesotans with at least one opioid prescription in 2012 and 2015**



SOURCE: Mathematica Policy Research analysis of claims and encounters data from the Minnesota All Payer Claims Database extracts 19 and 20v1.  
NOTE: High-dose opioid prescriptions are defined as prescriptions for at least 90 morphine milligram equivalents (MME) per day.

## Oxycodone, Percocet, and Vicodin Prescription Trends in Colorado, 2009-2017

Commercial, Medicaid, and Medicare Advantage, CO APCD



*Prescribing Opioids in Colorado: Oxycodone, Percocet, and Vicodin, 2019 Center for Improving Value in Health Care (CIVHC)*

## Emergency Department Use for Mental Health Reasons

Colorado All Payer Claims Database  
Commercial, Medicaid, Medicare Advantage, 2016-2018

Coloradans living with mental illness don't always have access to comprehensive services or seek timely care to support their needs. Many efforts are underway in Colorado to improve diagnosis and treatment of mental health conditions, reduce stigma related to seeking care, and expand coverage and access to services for those living with mental illness. Despite these efforts, across the state, the Emergency Departments (ED) remain a source of support for many suffering from potentially preventable mental health crises. This data from the Colorado All Payer Claims Database (CO APCD) provides a snapshot of utilization, cost and trends for visits to the ED with mental health as a primary diagnosis.

Overall



1.5%

of all ED visits had a mental health primary diagnosis\*

17,000

ED visits in 2018 were mental health-related\*



7%

of all mental health-related ED visits resulted in a hospital admission\*

\*This analysis calculates volume of claims related to a primary diagnosis of mental health and may be lower than expected when looking at other data sources that include secondary diagnoses of mental health conditions.



\$25.8M

in health care payments were made for mental health-related ED visits in 2018

Anxiety Disorder  
Major Depressive Disorder  
Panic Disorder

account for

50%

of the 213 diagnoses for mental health-related ED visits for adults and children

This analysis is based on claims data submitted by health insurance payers to the Colorado All Payer Claims Database (CO APCD) for care provided from 2016-2018 and paid for through Medicaid, Medicare Advantage and commercial payers in the state. The data does not include Medicare Fee-for-Service claims or ED visits provided through charity care. Volumes represent ED visits (free-standing or hospital-based) where the primary diagnosis was related to mental health as defined by the following ICD-10 codes, and includes ED visits that resulted in an inpatient hospital admission. Please note, these codes do not include diagnoses related to substance use disorder: F03; F20-F29; F30-F39, with exception of F32 and F33; F40-F48, with exception of F41 and F43; F41.1; F43.1; F43.2; F50-F59; F60-F69; F70-F79. Costs include all services provided during the visit and may not be exclusive to the mental health concern identified as primary diagnosis. For detailed methodology, please download the Excel dataset.

Geography & Payer Type



Across Colorado, ED utilization rates vary up to **three times** between the Division of Insurance (DOI) regions with the lowest and highest rates

From 2016-2018, across all age groups combined, ED utilization rates for...



Medicare Advantage **increased**



Commercial stayed the same



Medicaid **decreased**



1 in 4

mental health-related ED visits were children under the age of 18...

...most frequently for:

Major Depressive Disorder

Children

Access to the underlying dataset with information by payer, age group, DOI region and more is available at [www.civhc.org](http://www.civhc.org).



CENTER FOR IMPROVING  
VALUE IN HEALTH CARE

Emergency Department Use for Mental Health Reasons, 2019 Center for Improving Value in Health Care (CIVHC)

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# *Challenges*





# Challenges

- Changing healthcare landscape
- Non-FFS payments
- Data quality
- Data aggregation
- Gobeille vs. Liberty Mutual

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# *Hawai'i APCD: Future Work and Planning*



## Current Work with MQD

- Concurrent to our work on the Hawai'i APCD, Med-QUEST also recognized the need to invest in analytics to support Med-QUEST's growing data analytic needs to support program improvement, operations, and healthcare
- Enactment of Act 055 (18) and the establishment of the Health Analytics Office (HAO) within Med-QUEST, further solidified the Hawai'i APCD's partnership with Med-QUEST to continue the work
- Currently working with Med-QUEST to plan and implement an analytic platform and establish data governance processes to further support both Hawai'i APCD and Med-QUEST needs\*
- Leverages federal matching dollars to support the implementation and future maintenance of the platform\*
- Builds on existing APCD expertise and lessons learned and furthers data analytics within the State

\*Note funds for this work have been requested from CMS, all activities are contingent upon CMS funding approval



## Future State: CY 2021

- Integrated Data and Analytics Platform (MMIS Module)\*
  - Initiate Platform Procurement and Implementation
- Data Governance\*
  - Initiate Data Governance Procurement and Implementation
- Data Collection\*
  - *EUTF and EUTF Health Plans*: All EUTF data submitters brought to current status, providing regular quarterly submissions
  - *Medicare FFS*: Receive updated Medicare data (through CY 2019)
  - *Medicaid*: Initiate Medicaid data collection, quality assurance, and integration

\*Note funds for this work have been requested from CMS, all activities are contingent upon CMS funding approval



# Future Planning

- Collect data on Alternative Payment Models (APMs) / Value Based Payments (VBPs)
- Collect Medicare Advantage data
- Collect ERISA-funded data (*Gobeille vs. Liberty Mutual*)
- Establish consistent and effective matching, as SSN usage decreases
- Integrate claims data with other healthcare data sources (clinical, public health, etc.)



# Thank you!

Sean Okamoto, Project Manager, University of Hawaii - TASI/PHIDC

e: [sean@uhtasi.org](mailto:sean@uhtasi.org)

p: (808) 956-7582

Website: <https://phidc.ssri.hawaii.edu/endeavors/apcd/>