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## OFFICE OF ENTERPRISE TECHNOLOGY SERVICES

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June 30, 2023

The Honorable Ronald D. Kouchi  
President of the Senate  
and Members of the Senate  
Thirty-Second State Legislature  
State Capitol, Room 409  
Honolulu, Hawai'i 96813

The Honorable Scott K. Saiki  
Speaker and Members of the  
House of Representatives  
Thirty-Second State Legislature  
State Capitol, Room 431  
Honolulu, Hawai'i 96813

Aloha Senate President Kouchi, Speaker Saiki, and Members of the Legislature:

Pursuant to HRS section 27-43.6, which requires the Chief Information Officer to submit applicable independent verification and validation (IV&V) reports to the Legislature within ten days of receiving the report, please find attached the report the Office of Enterprise Technology Services received for the State of Hawai'i, Department of Human Services, Med-QUEST Division, Health Analytics Program.

In accordance with HRS section 93-16, this report may be viewed electronically at <http://ets.hawaii.gov> (see "Reports").

Sincerely,

  
Douglas Murdock (Jun 30, 2023 14:09 HST)

Douglas Murdock  
Chief Information Officer  
State of Hawai'i

Attachment



# Hawai'i Department of Human Services Med-QUEST Division Health Analytics Program

**IV&V Monthly Status Report**  
for May 2023

Report Date: June 9, 2023

# Overview

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Solutions that Matter

The background is a solid blue color. It features several abstract geometric shapes, including squares and rectangles, some of which are outlined in a lighter blue and others are solid. These shapes are scattered across the page, with a higher concentration on the left side. The text 'Executive Summary' is written in a white, serif font, positioned in the lower-left quadrant of the image.

# Executive Summary

# Executive Summary







In May 2023, the State of Hawai'i Health Analytics Program (HAP) continued strategic realignment sessions and reviews of existing requirements as well as moved forward with discussions on several topics including security design, data governance framework, service level agreements, and reporting.

The Integrated Data and Analytic Platform (IDAP) Development, Design, and Implementation (DDI) Vendor continued to realign with HAP expectations and vision. Strategic realignment meetings are scheduled to continue until June 9, 2023.

In addition to the IDAP Vendor meeting series, the Project Management Office (PMO) Vendor continued to facilitate and contribute to the building of the Data Governance (DG) Framework and distribution of Organizational Change Management (OCM) related work products.

Overall, IV&V continues to observe quality communication and collaboration among the HI HAP stakeholders and vendors. IV&V will continue to monitor execution of the HAP staffing strategy, DG framework development, OCM activities, and IDAP design sessions. In the next reporting period, IV&V will conduct IV&V Assessment Interviews and continue to conduct a deep analysis of project documentation and artifacts.

IV&V did not open any new findings during this reporting period.

Mar	Apr	May	Category	Health of Active Aspects	IV&V Observations
			Project Management		Although this category has outstanding staffing needs, the project has coverage for critical roles and a mitigation strategy to assign essential tasks while the vacancies are being filled. The PMO Vendor and DDI Vendor continue to communicate well and demonstrate strong project management practices.
N/A	N/A	N/A	Quality Management		There are no IV&V observations for this category due to the project's current phase in this reporting period.

# Executive Summary



Mar	Apr	May	Category	Health	IV&V Observations
N/A	N/A	N/A	Requirements Management		There are no IV&V findings for this category. The project continued with reviewing existing requirements during this reporting period.
N/A	N/A	N/A	Operating Environment		There are no IV&V observations for this category due to the project's current phase in this reporting period.
N/A	N/A	N/A	Development Environment		There are no IV&V observations for this category due to the project's current phase in this reporting period.
N/A	N/A	N/A	Software Development		There are no IV&V observations for this category due to the project's current phase in this reporting period.
N/A	N/A	N/A	System and Acceptance Testing		There are no IV&V observations for this category due to the project's current phase in this reporting period.
			Data Management		The HAP Data Governance framework is not yet established. Yet, building to complete DG Framework by the end of July 2023.
N/A	N/A	N/A	Operations Oversight		There are no IV&V observations for this category due to the projects current phase in this reporting period.
N/A	N/A	N/A	CMS Streamlined Modular Certification		There are no IV&V observations for this category due to the projects current phase in this reporting period.

# IV&V Findings and Recommendations



# IV&V Findings and Recommendations

## Project Management

Finding 3 – Issue: The lack of all required HAP project and program staff may cause delays in the HAP start-up/planning and execution phases.		Criticality Rating*
<p><b>Significance:</b></p> <p>Having limited resources to support HAP planning and execution phases could delay critical requirements gathering and validation processes, which could impact the effectiveness of the resulting solution. Also, stretching existing resources could put a strain on the quality of work required to maintain project efficiencies and execution.</p> <p>The Implementation Advanced Planning Document (IAPD) identifies several project resources that have yet to be obtained, including positions within the HAO, the University of Hawaii and AHCCCS. This may have a negative impact on the program and subsequent projects. The resources identified in the IAPD should be available to work on the project prior to the IDAP vendor onboarding to avoid rework, schedule delays, and overall productivity loss of the Program/Project Teams.</p> <p><b>May 2023 Status Update:</b> The project continues to progress with the existing hiring strategy and approach to streamline tasks so that the HAO vacancies will not be a single point of failure in terms of task assignments.</p>		M
Recommendations		Progress
• IV&V recommends continuing with hiring the required staff and/or contractors to fill open positions and roles		In-Progress
• If required work is postponed as priorities are established, IV&V recommends planning for the possibility of short- or longer-term additional resource needs to avoid downstream delays.		In-Progress

\* Refer to Slide 22 for Definitions on IV&V Findings Criticality Ratings



# IV&V Findings and Recommendations



## Project Management

**Finding 4 – Preliminary Concern: Lack of program roles and responsibilities may cause rework or gaps in planned activities and tasks.**

**Criticality Rating\***

**Significance:**

The HAP is comprised of several vendors providing specific services to support the program, requiring close communication and coordination of the activities and tasks in all phases of the HAP. Initially, as the roles and responsibilities are developed, gaps may be identified that require attention. The earlier gaps are identified and addressed, the risk to the program decreases. Additionally, the roles and responsibilities may also aid the program team to think/act holistically and cohesively avoiding work compartmentalized by silos.

**May 2023 Status Update:** The project continues to manage roles and responsibilities with existing processes. IV&V will determine whether this finding has been satisfied during the June IV&V Assessment Interviews.



**Recommendations**

**Progress**

IV&V recommends continuing with hiring the required staff.

In-Progress

IV&V recommends reviewing the Technical Sponsorship Charter and updating the document with any relevant changes, as well as expanding the RACI to include non- State Technical Sponsor roles and responsibilities like IDAP vendor roles and responsibilities within the SDLC and Certification Management activities.

N/A

*\* Refer to Slide 22 for Definitions on IV&V Findings Criticality Ratings*



# IV&V Findings and Recommendations

## Data Management

Finding 6 – Risk: A Data Governance framework is not yet established.		Criticality Rating*
<p><b>Significance:</b></p> <p>The Data Governance (DG) Framework is a foundational deliverable, essential to informing most of the DG work in progress. Without an approved DG framework, there may be rework required to align the work that is in progress to the DG framework once it is approved.</p> <p><b>May 2023 Status Update:</b> The HAP is establishing a DG framework. The project plans to complete set up of the Data Governance Framework by end of July.</p>		M
Recommendations		Progress
• IV&V recommends developing a DG Framework, policies, processes, practices, and tools.		In-Progress
• IV&V recommends communicating the DG structure to all key and impacted (internal and external) stakeholders.		In-Progress

\* Refer to Slide 22 for Definitions on IV&V Findings Criticality Ratings

# IV&V Findings and Recommendations



## Data Management

Finding 8 – Preliminary Concern: The lack of existing business rules glossary and designated data stewards could negatively impact data quality and reduce confidence in the accuracy and reliability of the data warehouse.		Criticality Rating*
<p><b>Significance:</b></p> <p>Having foundational data dictionaries, rules, and workflow documentation could prevent delays or ineffective resolution of data quality issues. Delays in unresolved data quality could lead to decreased confidence in the accuracy and reliability of the data warehouse.</p> <p><b>May 2023 Status Update:</b> During this reporting period, the project continued building out the HAP Data Governance Handbook, which identifies data policies, operations, reporting, OCM, and data sources. IV&amp;V assess progress in the upcoming June IV&amp;V Assessment Interviews.</p>		H
Recommendations		Progress
To mitigate this risk, it is essential to establish clear and comprehensive documentation of business glossary rules and designate data stewards to oversee the process. This approach will help to ensure that the IDAP vendor can quickly and effectively address any data quality issues that arise and maintain a high level of confidence in the accuracy and reliability of the data warehouse. Additionally, as data stewards are identified, it is important to document and communicate the level of effort, time commitment, and responsibilities of the data steward.		Planning in progress

\* Refer to Slide 22 for Definitions on IV&V Findings Criticality Ratings



# IV&V Findings and Recommendations

## Organizational Change Management

Finding 9 – Preliminary Concern: Lack of early formal Stakeholder identification in the DDI phase, may result in low-end user adoption and increased end-user error.		Criticality Rating*
<p><b>Significance:</b></p> <p>The lack of a formal stakeholder matrix that identifies user types like Super Users, Change Champions/Change Catalysts early in the DDI phase, before the JPAS/JAD sessions, may result in low-end user utilization/adoption rates and increased probability of end-user error rates in production. Having the right stakeholders in the JAD/JPASS sessions will encourage more comprehensive elicitation sessions and business requirements.</p> <p><b>May 2023 Status Update:</b> The project continues to meet for OCM discussions and collaborate on OCM related activities. At the time of this report, the HAP Bulletin was distributed to DDI stakeholders and the survey and KPI were provided to HAO for review and approval. IV&amp;V will examine this finding within the next reporting period to determine severity given recent activities.</p>		M
Recommendations		Progress
IV&V recommends identifying end-user types and including these types in the requirements and design sessions so that the resulting Solution addresses their needs and supports high-quality user experiences.		In-Progress
IV&V recommends updating the OCM plan to include more detail in how change will be communicated with a communication matrix and schedule for OCM activity execution. The plan should also include how end users will be engaged during DDI through to M&O.		N/A

\* Refer to Slide 22 for Definitions on IV&V Findings Criticality Ratings

# IV&V Findings and Recommendations



## CLOSED FINDINGS







Finding #	Category	Finding Statement	Finding Type	Reason for Closing	Resolution Date
1	Project Management	The HAP Sponsor and team are visible and provide dedicated leadership to the Program.	Positive Finding	Expired*	5/31/2022
2	Project Management	The PMO is planning to begin OCM earlier than planned.	Positive Finding	Expired*	5/31/2022
5	Project Management	Lack of a centralized program-level document repository may cause rework and delays by the project team to find the information needed to perform their activities.	Preliminary Concern	The PMO Vendor established a SharePoint site for all project aspects (State and Vendor) to share	6/30/2022
7	HAP Annual Conference	The HAP Annual Conference promoted a sense of coordination and collaboration in a multi-vendor environment prudent for the success of the HAP.	Positive Finding	Expired*	4/30/2023




\* Positive Findings automatically expire in the next quarterly reporting period.

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# IV&V Status

# IV&V Engagement Status

IV&V Engagement Area	May	Comments
IV&V Budget		There are no IV&V budget updates in this reporting period. HAO discussed with IV&V ad hoc work as part of existing budgetary allocation.
IV&V Schedule		There are no IV&V schedule updates in this reporting period.
IV&V Deliverables		The April IV&V Monthly Status Report was delivered and finalized. The IV&V team developed the draft May IV&V Monthly Status Report.
IV&V Staffing		IV&V added one resource for Project Management Support as well as Project Management and Organizational Change Management Assessments.
IV&V Scope		There are no IV&V scope updates in this reporting period.
CMS Streamlined Modular Certification		The HAO regularly reports to CMS on project activities and continues discussions with CMS. HAP planning for SMC Certification discussion meetings in June 2023.

Engagement Status Legend		
 The engagement area is within acceptable parameters.	 The engagement area is somewhat outside acceptable parameters.	 The engagement area poses a significant risk to the IV&V project quality and requires immediate attention.

## **IV&V activities in the May reporting period:**

- Drafted May IV&V Monthly Status Report
- Conducted bi-weekly check-in meetings with HAO and PMO Vendor
- Conducted documentation reviews
- Reviewed the official meeting minutes and project documents (Slides 17-18)
- Attended project meetings (Slides 19 – 21)

## **Planned IV&V activities for the June reporting period:**

- Continue attending project meetings
- Continue conducting bi-weekly check-in meetings with HAO and PMO Vendor
- Conduct IV&V Assessment Interviews with HAO, PMO, UH, IDAP Vendor, and State of Hawai'i Chief Information Security Officer
- Conduct deep analysis of project documentation
- Draft the IV&V Quarterly Assessment Report (April – June 2023)
- Finalize May IV&V Monthly Status Report
- Develop draft June IV&V Monthly Status Report



# Deliverables and Artifacts Reviewed



The following are a list of documents and artifacts reviewed during this period:

#	Documents/ Artifacts	Document Date(s)	Version
<b>Official Minutes and Meeting Notes Reviewed</b>			
1	Task Order 1 Extracts – Joint Discussion Meeting Minutes	May 2, 2023 May 9, 2023 May 16, 2023 May 23, 2023	N/A
2	DDI Discussion: Service Level Agreements (SLAs) Transcript	May 3, 2023	N/A
3	DDI Discussion: BI Reporting Transcripts	May 8, 2023 May 9, 2023 May 10, 2023	N/A
4	DDI – 6 Month Check-in Planning Meeting Minutes	May 11, 2023 May 25, 2023	N/A
5	HILOC Extract – Design Session Minutes	May 11, 2023 May 22, 2023	N/A
6	DDI HPMMIS Extract Work Session Minutes	May 12, 2023 May 26, 2023	N/A
7	HOKU PE File Discussion Minutes	May 15, 2023	N/A
8	DDI Discussion: Technical Support Transcript	May 15, 2023 May 16, 2023	N/A
9	DDI Discussion: Testing	May 30, 2023	N/A

# Deliverables and Artifacts Reviewed



#	Documents/ Artifacts	Document Date(s)	Version
Project Documents and Artifacts Reviewed During this Period			
10	Access Controls HOKU Data Source Questionnaire draft	April 26, 2023	N/A
11	Source Data Cleansing HOKU Data Source Questionnaire draft	April 28, 2023	N/A
12	HAP PMRS - User Personas Presentation	May 4, 2023	N/A
13	HAP PMRS - DG User Persona Roles - Draft	May 5, 2023	N/A
14	AHCCCS Provider Data Dictionary	May 25, 2023	N/A
15	HAP PMRS - DG Management Controls Overview	May 31, 2023	N/A



# Additional Inputs

The following are a list of meetings IV&V attended during this period:

#	Meetings and Work Sessions Attended	Dates
1	HAP PMO UH Touchpoint	May 1, 2023
2	HAP DDI Discussion: Topic – Service Level Agreements (SLAs)	May 1, 2023
3	HAP DDI Discussion: Topic – Service Level Agreements (SLAs)	May 2, 2023
4	HAP DDI Discussion: Topic – Service Level Agreements (SLAs)	May 3, 2023
5	HAP DDI Bi-Weekly Status Discussion	May 3, 2023
6	HAP DDI UH and IDAP Vendor – Reference, Flags, and Indicators	May 5, 2023
7	HAP – HAO and IV&V Touchbase	May 5, 2023
8	HAP PMO UH Touchpoint	May 8, 2023
9	HAP DDI Discussion: Topic – BI Reporting	May 8, 2023
10	HAP DDI Discussion: Topic – BI Reporting	May 9, 2023
11	HAP DDI Discussion: Topic – BI Reporting	May 10, 2023
12	HAP DDI Security Design Session – Compliance Framework	May 10, 2023



# Additional Inputs

#		Dates
13	HAP DDI APCD Discussion – Scope and Timeline	May 11, 2023
14	HAP AHCCCS – Data Solutioning	May 12, 2023
15	HAP OCM Touchpoint	May 12, 2023
16	HAP PMO UH Touchpoint	May 15, 2023
17	HAP DDI Discussion: Topic – Technical Support	May 15, 2023
18	HAP DDI Discussion: Topic – Technical Support	May 16, 2023
19	HAP DDI Bi-Weekly Status Discussion	May 17, 2023
20	HAP DDI Discussion: Demo – Machine Learning	May 17, 2023
21	HAP DDI: Security Design Session – Incident Response Plan	May 17, 2023
22	HAP – HAO and IV&V Touchpoint	May 19, 2023
23	HAP PMO – UH Touchpoint	May 22, 2023
24	HAP DDI Discussion: Topic – Training	May 22, 2023
25	HAP DDI Discussion: Topic – IDAP Vendor Update on Data Governance	May 24, 2023
26	HAP DDI Discussion: Topic – Analytic Layer	May 25, 2023






# Additional Inputs

#		Dates
27	HAP DDI Discussion: Topic – Testing	May 30, 2023
28	HAP DDI Bi-Weekly Status Discussion	May 31, 2023
29	HAP DDI – Security Design Session –Weekly	May 31, 2023

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# Appendices

# Appendix A – IV&V Criticality Ratings

Criticality Rating	Definition
 H	A high rating is assigned if there is a possibility of substantial impact to product quality, scope, cost, or schedule. A major disruption is likely, and the consequences would be unacceptable. A different approach is required. Mitigation strategies should be evaluated and acted upon immediately.
 M	A medium rating is assigned if there is a possibility of moderate impact to product quality, scope, cost, or schedule. Some disruption is likely, and a different approach may be required. Mitigation strategies should be evaluated and implemented as soon as feasible.
 L	A low rating is assigned if there is a possibility of slight impact to product quality, scope, cost, or schedule. Minimal disruption is likely, and some oversight is most likely needed to ensure that the risk remains low. Mitigation strategies should be considered for implementation when possible.

# Appendix B – Findings Log

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*The complete IV&V Findings Log for the DHS Health Analytics Project is provided in a separate file with the Quarterly Assessment Reports.*



# Appendix C – Acronyms and Glossary

Acronym	Definition
AHCCCS	Arizona Health Care Cost Containment System
APD	Advance Planning Document
BAA	Business Associate Agreement
CFR	Code of Federal Regulations
CM	Configuration Management
CMMI	Capability Maturity Model Integration
CMS	Center for Medicare and Medicaid Services
CR	Change Request
DDI	Design, Development and Implementation
DED	Deliverable Expectation Document
DCCA	Hawaii Department of Commerce and Consumer Affairs
DHS	Hawaii Department of Human Services
DLIR	Hawaii Department of Labor and Industrial Relations

# Appendix C – Acronyms and Glossary

Acronym	Definition
DOTAX	Hawaii Department of Taxation
EA	Enterprise Architecture
EFT	Electronic Funds Transfer
EPHI	Electronic Protected Health Information
ETS	State of Hawaii Office of Enterprise Technology Services
FAR	Federal Acquisition Regulation
HAR	Hawaii Administrative Rules
HHDC	Hawaii Health Data Center
HHS	U.S. Department of Health and Human Services
HIPAA	Health Information Portability and Accountability Act of 1996

# Appendix C – Acronyms and Glossary

Acronym	Definition
HPMMIS	Hawaii Pre-paid Medical Management Information System
HRS	Hawaii Revised Statutes
HST	Hawaii Standard Time
IDAP	Integrated Data And Analytic Platform
IEEE	Institute of Electrical and Electronic Engineers
IRS	Internal Revenue Service
ITIL	Information Technology Infrastructure Library
IV&V	Independent Verification and Validation
KOLEA	Kauhale On-Line Eligibility Assistance
M&O	Maintenance & Operations
MQD	Hawaii Department of Human Services MedQuest Division
NIST	National Institute of Standards and Technology

# Appendix C – Acronyms and Glossary

Acronym	Definition
OBC	Outcomes Based Certification
OE	Operating Environment
OIT	Department of Human Services Office of Information Technology
PHI	Protected Health Information
PIP	Performance/Process Improvement Plan
PMBOK®	Project Management Body of Knowledge
PMI	Project Management Institute
PMO	Project/Program Management Office
PMP	Project Management Plan
QA	Quality Assurance
QM	Quality Management

# Appendix C – Acronyms and Glossary

Acronym	Definition
RMP	Requirements Management Plan
RTM	Requirements Traceability Matrix
SEI	Software Engineering Institute
SLA	Service-Level Agreement
SMC	Streamlined Modular Certification
SME	Subject Matter Expert
SOW	Statement of Work, Scope of Work
VVP	Software Verification and Validation Plan
XLC	Expedited Life Cycle

# Appendix D – Background Information

## HI DHS Health Analytics Program

The State of Hawaii through the Department of Human Services (DHS) is building a health analytics program by developing an integrated data and analytics platform to consolidate multiple data sources into a single integrated analytic platform, evolving its capacity for advanced analytics, and maturing the data governance processes of Medicaid data sources that will contribute data to the platform.

## Health Analytics IV&V Project

IV&V performs objective assessments of the project beginning with the oversight and evaluation of the design, development, and implementation (DDI) phase of the establishment of the health analytics project. IV&V will support DHS in developing an evaluation framework that will endure beyond the scope of the DDI phase of the project, into future maintenance and operations (M&O) phases. This project shall establish an evaluation strategy and structure that continues to facilitate the growth, evolution, optimal operations and maturity of DHS' health analytics project.

The six key areas of the IV&V scope of work are:

1. Planning
2. Implementation
3. Recommendations
4. Evaluation
5. Reporting
6. Other Requirement

# Appendix D – Background Information

## What is Independent Verification and Validation (IV&V)?

- Oversight by an independent third party that assesses the Project against industry standards to provide an unbiased view to stakeholders
- The goal of IV&V is to help the State get the solution they want based on requirements and have it built according to best practices
- IV&V helps improve design visibility and traceability and identifies (potential) problems early
- IV&V objectively identifies risks and communicates to project leadership for risk management

## PCG's Eclipse IV&V® Technical Assessment Methodology

- Consists of a 4-part process made up of the following areas:
  1. **Discovery** – Discovery consists of reviewing documentation, work products and deliverables, interviewing project team members, and determining applicable standards, best practices and tools.
  2. **Research and Analysis** – Research and analysis is conducted in order to form an objective opinion.
  3. **Clarification** – Clarification from project team members is sought to ensure agreement and concurrence of facts between the State, the Vendor, and PCG.
  4. **Delivery of Findings** – Findings, observations, and risk assessments are documented in this monthly report and the accompanying Findings and Recommendations log. These documents are then shared with project leadership on both the State and Vendor side for them to consider and take appropriate action on

## Logic Model Approach

PCG will leverage the Eclipse Assessment Methodology described above to perform traditional IV&V activities and blend it with a project logic model to focus on project outcomes (answering the question, “Is the integrated data and analytic platform and Data Governance Program helping DHS’ Medicaid program achieve its desired outcomes?”) with the underlying objective of achieving CMS certification through the OBC process. Using this blended approach, we will evaluate the inputs, activities, outputs, short-term outcomes, intermediate outcomes, and long-term outcomes of the project and will inform project stakeholders of significant risks or issues as the Health Analytics Project is planned, developed and deployed.

# Appendix D – Background Information

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## **IV&V Assessment Categories for the Health Analytics Project:**

- Project Management
- Quality Management
- Training
- Requirement Management
- Operating Environment
- Development Environment
- Software Development
- System and Acceptance Testing
- Data Management
- Operations Oversight



Ending Slide



**Solutions that Matter**