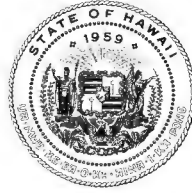


JOSH GREEN, M.D.  
GOVERNOR



DOUGLAS MURDOCK  
CHIEF INFORMATION  
OFFICER

**OFFICE OF ENTERPRISE TECHNOLOGY SERVICES**

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March 22, 2024

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 (Mar 22, 2024 15:23 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 January 2024

Report Date: February 9, 2024

# Overview

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- [Executive Summary](#)
- [IV&V Findings and Recommendations](#)
- [IV&V Engagement Status](#)
- [Appendices](#)
  - [A – IV&V Criticality Ratings](#)
  - [B – Risk Identification Report](#)
  - [C – Acronyms and Glossary](#)
  - [D – Background Information](#)



Solutions that Matter

The background is a solid dark blue color. Scattered across the page are various abstract geometric shapes in lighter shades of blue. These include squares, rectangles, and rounded rectangles, some of which are outlined in white or light blue, while others are solid. The shapes are arranged in a way that suggests a network or a flow, with some shapes overlapping or connected by thin lines. The overall aesthetic is clean, modern, and professional.

# Executive Summary

# Executive Summary



Overview: In January 2024, the State of Hawai'i Health Analytics Program (HAP) Integrated Data and Analytic Platform (IDAP) Project worked towards finalizing the scope of the Minimal Viable Product (MVP) and continued to make progress with Data Governance (DG) in the areas of mapping Flags and Indicators to dashboards, data modeling, data loading and processing, updating the DG Orientation Program and DG Handbook.

The Project held ongoing Business Intelligence (BI), DG, Security, Data Model, Training, Portal and Master Data Management (MDM) design sessions, which allowed stakeholders to provide input on design and development. Data quality issues were brought forward to the State with new "All Things Data" procedures. The Project continued to build the User Acceptance Testing (UAT) Plan. A revised Change Request (CR) workflow was submitted for State approval. New resources (Subject Matter Experts, or SMEs) from Public Consulting Group (PCG) joined the Project to provide technical assistance and offer technical support to the State.

The Design, Development & Implementation (DDI) vendor delivered Hawai'i Prepaid Medical Management Information System (HPMMIS) Provider, Recipient, and partial Claims & Encounters data models. The DDI vendor's Quality Assurance (QA) team conducted initial testing of the models. These HPMMIS Provider and Recipient data models have been through state validation exercises confirming the adequacy of the data model. The DDI vendor finalized the plan for 2024 Optum Symmetry runs; results of the Optum Symmetry Preliminary Run are pending. Decisions surrounding various MVP topics are being finalized.

The DDI vendor received some of the business rules for Flags and Indicators. However, delays in the delivery of business rules for Flags and Indicators to support data modeling activities has impacted the project scope and schedule.

Findings: The January 2024 IV&V Report includes six findings (1 issue, 3 risks, and 2 preliminary concerns) regarding insufficient project resources, the absence of a baselined schedule, and the planned use of different project management tools to support the Project. The report also raises concerns over data quality and the delayed go-live date of the IDAP solution which has been pushed to the end of calendar year 2024. Opportunities to mitigate each one of these risks are provided on the remaining pages.

# Project Health



Nov	Dec	Jan	Category	Health	IV&V Observations
			Project Management		The Project has coverage for critical roles and a mitigation strategy to assign essential tasks while vacancies are being filled. There is no Integrated Master Schedule (IMS) for the Project. Go-live has been delayed from February 2024 to late 2024, with no defined date.
N/A	N/A		Quality Management		Data quality issues identified via data modeling, ETL and testing activities are being identified to the HAO in accordance with the "All Things Data" procedures.
N/A	N/A		Requirements Management		The Project has developed a high-level Requirements Management Plan. Requirements have been defined and documented. There is a Requirements Traceability (RT) Process.
N/A	N/A		Operating Environ.	--	The DDI vendor changed its default ticketing system from ServiceNow to JIRA.
N/A	N/A		Development Environment		Development of the data models (HPMMIS Provider, Recipient, Claims & Encounters) and weekly design sessions have been ongoing
N/A			Software Development		Delays in receiving business rules for Flags and Indicators have precluded the DDI vendor from completing the designs of dashboards.
N/A	N/A		System & Accept. Testing		The Project continued with the creation of the User Acceptance Testing (UAT) Plan; resource planning is still underway.
			Data Management		While the HAP Data Governance framework is not yet established, the Project is making significant strides towards the DG Framework creation, finalizing the DG Orientation Package and DG Handbook and implementation of tools.
N/A	N/A	N/A	Operations Oversight	--	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	CMS Streamlined Modular Certification	--	There are no IV&V observations for this category due to the Project's current phase in this reporting period.




# IV&V Findings and Recommendations

# IV&V Findings and Recommendations



## Project Management

<b>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.</b>	<b>Criticality Rating*</b>
<p><b>Significance:</b></p> <p>Having limited resources to support the 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 secured, including positions within the HAO, the University of Hawaii (UH), and the Arizona Health Care Cost Containment System (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>January 2024 Status Update:</b> Resource needs continue; the Health Analytics Office (HAO) continues to seek positions to fill key resource gaps.</p>	
<b>Recommendations</b>	<b>Progress</b>
<ul style="list-style-type: none"><li>• IV&amp;V recommends continuing with hiring the required staff and/or contractors to fill open positions and roles</li></ul>	In Progress
<ul style="list-style-type: none"><li>• If required work is postponed as priorities are established, IV&amp;V recommends planning for the possibility of short- or longer-term additional resource needs to avoid downstream delays.</li></ul>	In Progress


\* Refer to Slide 21 for Definitions on IV&V Findings Criticality Ratings



# IV&V Findings and Recommendations



## Project Management

Finding 10 – Risk: Lack of an Integrated Master Schedule may expose the Project to unpredicted risks and cost overruns.	Criticality Rating
<p><b>Significance:</b></p> <p>The lack of a baselined Integrated Master Schedule (IMS) for the HAP Project could create challenges in accurately defining the updated scope, resulting in ambiguity of the deliverables and timelines, and difficulty in tracking project progress.</p> <p><b>January 2024 Status Update:</b> IV&amp;V created a new finding.</p>	
Recommendations	Progress
IV&V recommends that the PMO creates the Integrated Master Schedule (IMS) and baseline the schedule to account for the increased scope and clearly delineate ongoing and upcoming tasks and to baseline the IMS.	New

# IV&V Findings and Recommendations



## Requirements 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.**

### Significance:

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/JPAS sessions will encourage more comprehensive elicitation sessions and business requirements.

**January 2024 Status Update:** The Project continues to keep stakeholders informed and includes key stakeholders in critical design sessions. IV&V will close this item within the next reporting period due to consistent communication to stakeholders.

### 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 Organizational Change Management (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



# IV&V Findings and Recommendations

## Operating Environment

**Finding 11 – Preliminary Concern: The State and DDI vendor are using different tools to manage the system development life cycle of the HAP Project.**

**Significance:**

A decision was made that JIRA would serve as the ticket management system for IDAP instead of ServiceNow. The DDI vendor will be using Micro Focus Application Lifecycle Management (ALM) for managing, developing, and tracking requirements, requirements traceability, test cases and defects. JIRA is a proven platform for managing the entire development lifecycle. Using two separate tools like JIRA and Micro Focus ALM can have disadvantages, e.g., integration challenges, duplication efforts, and increased costs. It's essential to consider the potential drawbacks and challenges associated with using multiple tools simultaneously.


**January 2024 Status Update:** IV&V created a preliminary concern.

Recommendations	Progress
• Assess if the project can standardize and use one tool (e.g., JIRA) instead of two (JIRA and Micro Focus ALM).	



# 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>January 2024 Status Update:</b> Purview design sessions are ongoing. The DDI Vendor focused on configuring Purview within the IDAP Azure environment and Purview Collection and continues to develop the project plan for the next steps in Purview implementation. It was decided that the Purview MVP will be comprised of approximately 125 assets. The Project has updated the DG Orientation Program and DG Handbook and the State provided feedback (cost concerns) on the DDI Vendor's proposal submitted in December 2023 for the MDM tool.</p>	
Recommendations	Progress
<ul style="list-style-type: none"><li>• IV&amp;V recommends developing a DG Framework, policies, processes, practices, and tools.</li></ul>	In Progress
<ul style="list-style-type: none"><li>• IV&amp;V recommends communicating the DG structure to all key and impacted (internal and external) stakeholders.</li></ul>	In Progress



# IV&V Findings and Recommendations

## Data Management

Finding 8 – Risk: The lack of an 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> <ul style="list-style-type: none"><li>• <b>January 2024 Status Update:</b> Flags and Indicators are a basis for the business rules. UH partially delivered and rescheduled delivery dates for different categories of Flags and Indicators. The due date slipped from 11/30/2023 to 02/23/2024, representing a scope and schedule impact. Delays in getting the business rules for Flags and Indicators have precluded the DDI Vendor from completing the design of any dashboards. IV&amp;V is concerned about the impact on the total cost of the project.</li></ul>	
Recommendations	Progress
<p>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.</p>	In Progress

# 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








# IV&V Status

# IV&V Engagement Status

IV&V Engagement Area	Jan	Comments
IV&V Budget		No changes to the IV&V budget.
IV&V Schedule		No IV&V schedule updates in this reporting period.
IV&V Deliverables		No changes to the deliverables
IV&V Staffing		IV&V began reassigning resources from team to support HAO technical assistance request.
IV&V Scope		HAO discussing PCG IV&V scope change to leverage expertise for HI HAP technical assistance.
CMS Streamlined Modular Certification		The HAO regularly reports to CMS on project activities and continues discussions with CMS.

## 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.
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## **IV&V activities in the January reporting period:**

- Continue attending project meetings
- Begin HI HAP technical assistance
- Assess project documentation and activities
- Finalize January IV&V Monthly Status Report
- Develop draft February IV&V Monthly Status Report

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

- Continue attending project meetings
- Begin HI HAP technical assistance
- Assess project documentation and activities
- Finalize February IV&V Monthly Status Report
- Develop draft March IV&V Monthly Status Report

# Deliverables and Artifacts Reviewed



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

#	Documents/ Artifacts	Dates
1	Change Requests	
2	MDM_Data Source to Data Elements_Draft_2024-01-20.ppt	
3	HAP_DDI - Bi-Weekly Status Report - 01.09.2024 thru 01.23.2024.pptx (sharepoint.com)	
4	MDM requirements excel.	
5	Recipient DM Validation Tracker.xlsx (sharepoint.com)	
6	Design Session 2 - Optum Data Governance Purview design presentation	
7	HI HAP Business Processes	
8	HAP Day 1 Tasks and Workflows- MVP - 1.12.2024.pptx Data Quality Items.	



# Additional Inputs

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

#	Meetings and Work Sessions Attended	Date
1	HAP DDI All Data	1/2/2024 1/9/2024 1/16/20 1/23/2024 1/30/2024
2	HAP_DDI - Leader's Strategy Meeting - MONTHLY	1/4/2024
3	HAP_IDAP_Hawaii Dashboard Design Meetings (RACI: BUSINESS INTELLIGENCE)	1/4/2024 1/11/2024 1/18/2024 1/25/2025
4	HAP PMO – UH Touchpoint	1/8/2024 1/22/2024
5	HAP IDAP Symmetry Design Session	1/16/2024
6	HAP_IDAP_Purview Design Session (RACI: Data Governance)	1/16/2024 1/23/2024 1/30/2024
7	HAP_IDAP_Recipient Model Validation Follow-up (RACI - Data Management)	1/23/2024
8	HAP_IDAP_MDM Design Session (RACI: Data Management)	1/24/2024
9	HAP DDI – Bi-Weekly Status Discussion	1/24/2024



# Additional Inputs

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




#	Meetings and Work Sessions Attended	Date
10	HAP_IDAP - Security Design Session - Weekly	1/31/2024
11	HAP_IDAP_D013 - Business Needs Document - Deliverable Walkthrough (RACI: PORTAL)	1/31/2024





# Appendices

# Appendix A – IV&V Criticality Ratings

Criticality Rating	Definition
	<p>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.</p>
	<p>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.</p>
	<p>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.</p>

# 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

## 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

## 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.

## 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



**Solutions that Matter**