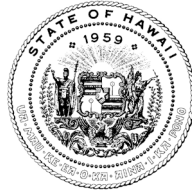


DAVID Y. IGE  
GOVERNOR



DOUGLAS MURDOCK  
CHIEF INFORMATION  
OFFICER

## OFFICE OF ENTERPRISE TECHNOLOGY SERVICES

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February 16, 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

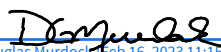
The Honorable Scott K. Saiki  
Speaker and Members of the  
House of Representatives  
Thirty-Second State Legislature  
State Capitol, Room 431  
Honolulu, Hawai'i 96813

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 (Feb 16, 2023 11:15 HST)

Douglas Murdock  
Chief Information Officer  
State of Hawai'i

Attachment



# Hawaii Department of Human Services Med-QUEST Division Health Analytics Program

Final IV&V Status Report  
for Reporting Period: January 1-31, 2023

*Submitted: February 13, 2023*

# 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 blue color. It features several decorative elements: a cluster of overlapping squares and rounded rectangles in various shades of blue (light, medium, and dark) in the upper-left quadrant; a single large, light-blue rounded rectangle centered below the text; and another cluster of overlapping squares and rounded rectangles in the lower-right quadrant, with some light blue lines extending from the bottom right corner.

# Executive Summary

# Executive Summary



In January, the HAP team was focused on several key activities, including:



- The final planning activities for the onboarding of the IDAP vendor in early February 2023.
- The HAO informed the HAP team that the Data Governance vendor contract will conclude at the end of January 2023. Since Data Governance is at the 'heart' of the HAP project, the HAO is actively pursuing procurement options to on-board a new Data Governance vendor along with evaluating near-term options to avoid a negative impact to the HAP project.
- The HAP project team spent a considerable amount of time planning and preparing for the HAP Annual Conference, which coincides with the IDAP vendor onboarding activities. The conference will be held in Hawaii with most if not all HAP vendors participating on-site. Remote participation is also available for those staff that did not travel.
- The HAP PMO vendor is planning to restructure the meeting schedule as it moves from the planning phase into the Design, Development and Implementation (DDI) phase.
- The HAO is working on several HAP support procurements.

IV&V anticipates the pace of the project will increase as the IDAP vendor onboards and the HAP Integrated Master Schedule is developed/ executed. The HAP Annual Conference will lay the foundation for the collaboration and coordination as the project moves forward. This is a great way to begin the onboarding of the IDAP vendor and is a significant investment by the IDAP vendor as the host along with DHS and the HAP vendors to participate face-to-face. It will establish solid working relationships along with gaining a better understanding of roles and responsibilities.

Nov	Dec	Jan	Category	IV&V Observations
H	H	H	Project Management	The IDAP Vendor is planned to start in February 2023, meaning the lead time required to hire and train the required staff has diminished. IV&V notes progress was made but without the DG vendor along with some of remaining open positions this remains a high risk to the project.
N/A	N/A	N/A	Quality Management	There are no IV&V observations for this category due to the projects current phase in this reporting period.

# Executive Summary



Nov	Dec	Jan	Category	IV&V Observations
N/A	N/A	N/A	Requirements Management	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	Operating Environment	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	Development Environment	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	Software Development	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	System and Acceptance Testing	There are no IV&V observations for this category due to the projects current phase in this reporting period.
N/A			Data Management	The HAP Data Governance framework is not yet established.
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 Outcomes Based 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



## Preliminary Concerns Investigated During the Reporting Period


#	Finding	Category
4	<p><b>Roles and Responsibilities:</b> 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. Clearly documented roles and responsibilities should be established to ensure that the integration points and decision-makers are identified, and each vendor performs to those expectations. Initially, as the roles and responsibilities are developed, gaps may be identified that require attention. As 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. The HAO required each vendor to develop a Project Management Plan which should include the generation of the roles and responsibilities. Once established, IV&amp;V will validate it includes the level of detail and cross-functional aspects that are necessary to minimize risk.</p> <p><b>January Status Update:</b> Continued progress was made with the Technical Sponsor SME's. The project has sponsors for most of the technical areas, and agreements are being executed. This will play a large role in developing a RACI matrix. .</p>	Project Management



# IV&V Findings and Recommendations



## Project Management


#	Key Findings	Criticality Rating
2	<p><b>Risk:</b> The lack of all required HAP project and program staff may cause delays in the HAP start-up/planning and execution phases.</p> <p><b>Observation:</b> 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>January Status Update:</b> Good progress to report this month in that several positions were filled in the month of January. UH has hired two faculty positions and they began working on HAP this month, the HAO has been approved to publish the last open position and have received some interest on two open requisitions, interviews are being planned. AHCCCS has contracted with a vendor to provide additional HAP staff. The HAO is procuring Data Governance services and is also planning to deploy a short-term solution to minimize impact to the HAP program.</p>	

Recommendations	Progress
<ul style="list-style-type: none"> <li>Continue to take the actions already in progress to hire the required staff.</li> </ul>	In process
<ul style="list-style-type: none"> <li>If feasible, consider filling open positions with contract staff.</li> </ul>	In process
<ul style="list-style-type: none"> <li>As the IDAP vendor is planned to onboard in February, prioritize the work for the other vendors to be as prepared as possible.</li> </ul>	In process
<ul style="list-style-type: none"> <li>If required work is postponed as priorities are established, plan for the possibility of short- or longer-term additional resource needs to avoid down-stream schedule delays.</li> </ul>	In process

# IV&V Findings and Recommendations



## Data Management

#	Key Findings	Criticality Rating
5	<p><b>Risk: The HAP Data Governance (DG) framework is not yet established.</b></p> <p><b>Observation:</b> The Data Governance vendor planned to have their initial Project Management Plan submitted within 60 days of contract start, establishing how the Data Governance Vendor will manage the project work. The other specific initial Data Governance deliverables (e.g., Roles and Responsibilities, Data Governance Hierarchy, Pilot test) were planned to be complete between four to ten months from contract start date.</p> <p><b>January Status Update:</b> The Data Governance Framework has not yet been established. Freedman Healthcare (FHC) as the HAP Data Governance vendor ended their engagement on the HAP project effective 01/31/2023. The HAO is actively working on a solution which may include near-term procurements for Data Governance Services along with other interim options to avoid a schedule impact.</p>	
Recommendations		Progress
<ul style="list-style-type: none"> <li>As part of the Freedman Healthcare close down activities, request Freedman Healthcare to upload all HAP project artifacts and deliverables (regardless of the status) to the HAP Program Repository.</li> </ul>		In process
<ul style="list-style-type: none"> <li>Using the procurement options available to the HAO, procure for Data Governance services as soon as possible. Working with the DHS leadership, identify if there are any options for a short-term solution to avoid disruption to the overall HAP program.</li> </ul>		In process



# IV&V Status

# IV&V Engagement Status



IV&V Engagement Area	Dec	Comments
IV&V Budget		There are no IV&V budget updates in this reporting period.
IV&V Schedule		There are no IV&V schedule updates in this reporting period.
IV&V Deliverables		The December Draft and Final IV&V Monthly Status Report were delivered on-time.  The Final Quarterly Assessment Report was delivered to the HAO and PMO Vendor.
IV&V Staffing		Mark Reynolds joined the IV&V team and will be focused on the technical solution development by the IDAP Vendor.
IV&V Scope		There are no IV&V scope updates in this reporting period.
CMS Outcomes Based Certification		The HAO has and will continue discussions with CMS to ensure the HAP clearly understands and meets CMS' Certification expectations.

## 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:
  - The Draft and Final December Monthly Status Report were delivered
  - Conducted check-in meetings with HAO and PMO Vendor
  - Reviewed the project procurement and contract documents
  - Attended the HAP PMO meetings
  - Reviewed HAP project artifacts
  - Updated the CMS Quarterly IV&V Progress Report
  - Initiated planning activities for the next IV&V Quarterly Assessment
  - Delivered the final first Quarterly IV&V Assessment Report.
- Planned IV&V activities for the February reporting period:
  - Continue reviewing the project procurement and contract documents
  - Review project artifacts as they become available to IV&V
  - Attend program status meetings and other project meetings as they are established by the PMO vendor
  - Develop IV&V Deliverables
  - Attend the HAP Annual Conference
  - Begin the IV&V Quarterly Assessment
  - Conduct meetings with the HAO.

# Deliverables and Artifacts Reviewed



Deliverable or Artifact Name	Deliverable Date	Version
UH Contract DHS-21-MQD-0108 execute K.pdf	05/17/2021	N/A
SC#21 executed K.pdf	06/1/2021	N/A
MQD-HAO-2022-D1-TO1_IDAP_Initial-Build.pdf	N/A	N/A
MQD-HAO-2022-D1-TO1 – Amendment #1.docx	03/4/2022	N/A
MQD-HAO-2022-D1-TO1 Questions and Responses due Mar 4_ah.docx	03/4/2022	N/A
MQD-HAO-2022-D1-TO1 Questions and Responses due Mar 4 final.pdf	03/4/2022	N/A
MQD-HAO-2022-D1-TO1_Attachments_B_Amendment #2 FINAL.docx	N/A	N/A
MQD-HAO-2022-D1-TO1 – Amendment #2 FINAL.docx	03/14/2022	N/A
MQD-HAO-2022-D1-TO1_Attachments_A_and_B_Amendment #1.xlsx	N/A	N/A
MQD-HAO-2022-D1-TO1_Attachment C_Cost_Proposal_Worksheet_Amendment #1.xlsx	N/A	N/A
HI-2021-02-10-MMIS-IAPD-Analytics-FFY2021-2022 approval Letter Final.pdf	03/18/2021	N/A
HI-2021-02-10-MMIS-IAPDU-Analytics APD Approval Letter.pdf	10/18/2021	N/A

# Deliverables and Artifacts Reviewed



Deliverable or Artifact Name	Deliverable Date	Version
MQD-HAO-2022-D1-TO1_Attachments_B_Amendment #2 FINAL.docx	N/A	N/A
MQD-HAO-2022-D1-TO1 – Amendment #2 FINAL.docx	03/14/2022	N/A
MQD-HAO-2022-D1-TO1_Attachments_A_and_B_Amendment #1.xlsx	N/A	N/A
MQD-HAO-2022-D1-TO1_Attachment C_Cost_Proposal_Worksheet_Amendment #1.xlsx	N/A	N/A
HI-2021-02-10-MMIS-IAPD-Analytics-FFY2021-2022 approval Letter Final.pdf	03/18/2021	N/A
HI Analytics IAPD_UPDATE_Final_9-21-2021.pdf	09/2021	N/A
HI Analytics IAPD_FINAL.pdf	02/2021	N/A
RFP-MQD-2021-015 Integrated Data Analytic Platform Amendment #1 final & appendix L.pdf	04/21/2021	N/A
RFP-MQD-2021-015 Integrated Data Analytic Platform Amendment #2 final & appendix M.pdf	04/28/2021	N/A
RFP-MQD-2021-015 Integrated Data Analytic Platform QA Doc Due Apr 28 final.pdf	04/28/2021	N/A
RFP-MQD-2021-015 Integrated Data Analytic Platform Amendment #3 final.pdf	05/07/2021	N/A
MQD Analytics Platform RFP-MQD-2021-015 with Appendices.pdf	03/31/2021	N/A

# Deliverables and Artifacts Reviewed



Deliverable or Artifact Name	Deliverable Date	Version
HAP PMO Monthly Status Report	11/30/2022	1.0
Overview of Med-QUEST Current State Data Governance	N/A	N/A
Med-QUEST Data Governance Gap Analysis	N/A	v.2
HAO AHCCCS Data Extract Weekly Status Report 1623	1/6/2023	N/A
HAO AHCCCS Data Extract Weekly Status Report 11323	1/13/2023	N/A
HAO AHCCCS Data Extract Weekly Status Report 12023	1/20/2023	N/A
HAP_UH Weekly Status Report	1/6/2023	N/A
HAP_UH Weekly Status Report	1/13/2026	N/A
HAP Data Dictionary & Gap Backlog	1/9/2023	N/A
Access Control - Data Product Matrix & Definitions.docx	1/9/2023	N/A
Access Control - Process & Decision Tree for External Requests.pptx	1/9/2023	N/A
Access Control - Requirements and Limitations on Data Requests.docx	1/9/2023	N/A



# Deliverables and Artifacts Reviewed



Deliverable or Artifact Name	Deliverable Date	Version
Data Dictionary Gap Backlog.xlsx	1/10/2023	N/A
Data Source Documentation Organization Strategy 20230120.docx	1/20/2023	N/A
Data Source Summary and Contact Info 20221213.xlsx	1/30/2023	N/A
DG Hierarchy - DGW - Draft Email to Members 04-08-22.docx	1/10/2023	N/A
DG Hierarchy - DGW - Expanded Roles & Responsibilities.docx	1/12/2023	N/A
DG Hierarchy - Draft of Committee Roles & Responsibilities.pptx	1/12/2023	N/A
DG Orientation - Anti-competitive Behavior 03.11.2022.pptx	1/10/2023	N/A
DG Orientation - Data Access, HIPAA, and other Privacy Considerations.pptx	1/27/2023	N/A
DG Orientation - HAP Academy - FHC & Data Governance Overview.pptx	1/13/2023	N/A
DG Orientation - HI Rules & Statutes Relevant to HAP.pptx	1/10/2023	N/A
DG Orientation - Steering Committee Kickoff - Jan 2022.pptx	1/10/2023	N/A
HAP DG Close-Out Summary - January 2023.docx	1/27/2023	N/A
Data Dictionary Gap Backlog.xlsx	1/10/2023	N/A

# Deliverables and Artifacts Reviewed



Deliverable or Artifact Name	Deliverable Date	Version
HAP DG Data Dictionary.xlsx	1/30/2023	N/A
HI_DG_TableList_Descriptions_20221219.xlsx	1/27/2023	N/A
HAP Program Action Item List	N/A	N/A
HAP Program Decision Log	N/A	N/A
HAP Program Lessons Learned	N/A	N/A
HAP Program Risks and Issues	N/A	N/A
HAP_PMO - APDU - 20221107-Annual.pdf	11/7/2022	v2.0



## Meetings and/or Sessions Attended/Observed:




1. HAO/PMO and IV&V Weekly Touch Base – 01/09/2023, 01/23/2023, 01/30/2023
2. HAP Annual Conference – 01/05/2023, 01/12/2023, 01/18/2023, 01/23/2023, 12/25/2023, 01/25/2023
3. HAP All Hands Meeting – 01/25/2023
4. IV&V Team Meeting – 01/03/2023, 01/09/2023, 01/17/2023, 01/23/2023, 01/30/2023
5. HAP\_AHCCCS - Data Solutioning – 01/13/2023, 01/20/2023, 01/27/2023
6. HAP IV&V Team Onboarding – 01/17/2023, 01/24/2023
7. HAP IV&V Monthly Status Report Review – 01/17/2023
8. HAP\_HAO - UH and DG Cross Functional Flow – 01/18/2023



# 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 Findings Log for the DHS Health Analytics Project will be provided in a separate file in future reports when findings are defined.

# Appendix C – Acronyms and Glossary



<b>Acronym</b>	<b>Definition</b>
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
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
OE	Operating Environment
OBC	Outcomes Based Certification
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
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**