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January 18, 2023

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


The Honorable Scott K. Saiki  
Speaker and Members of the  
House of Representatives  
Thirty-First 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 (Jan 19, 2023 09:00 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: December 1-31, 2022

*Submitted: January 13, 2023*

# Overview

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Solutions that Matter



# Executive Summary




# Executive Summary



In December, the HAP team continued to focus on planning and preparing for the onboarding of the IDAP vendor in early February 2023. This is a significant milestone for the HAP in that when the IDAP vendor begins work, most of the HAP vendors will be onboard to complete the project work. Recognizing the significance, the HAO is planning a HAP Annual Conference in February 2023 as the IDAP vendor conducts their kick-off session. This will take place in Hawaii with representatives from each vendor participating in-person. It will lay the foundation on how the IDAP will be developed along with the roles, responsibilities, collaboration and integration points between the vendors for the HAP to be successful.


Additionally, the HAP vendors continue to work on the deliverables to include the processes that will be followed to develop the HAP. As the IDAP onboards, work will continue to refine those areas where collaboration and hand-offs between the vendors occur to ensure there is clear responsibility and accountability for all aspects of the work products.

The HAO did receive CMS' approval of the revised Advance Planning Document (APD) which includes adjustments identified during the discovery and planning activities to-date. The IV&V team completed and published the draft HAP Quarterly Assessment report that evaluates the HAP's progress achieving the State and CMS approved IDAP outcomes. The final is planned to be published in early January 2023..

Oct	Nov	Dec	Category	IV&V Observations
			Project Management	The IDAP Vendor is planned to start in February 2022, meaning the lead time required to hire and train the required staff is diminishing. Without the needed staff with the required skill sets, the project is at risk of completing the work required by the IDAP vendor to develop their scope of work.
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



Oct	Nov	Dec	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	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>December Status Update:</b> The HAO conducted a meetings with DHS Technical SMEs to provide them a HAP overview and identify volunteers to join the HAP team and support the build of the IDAP.</p>	Project Management



# IV&V Findings and Recommendations




## Findings Opened During the Reporting Period

#	Finding	Category
5	<p><b>Risk:</b> The HAP Data Governance (DG) framework is not yet established.</p> <p><b>Priority:</b> High</p> <p>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>Recommendations:</b> Identify and address as appropriate the root cause(s) of the delays to the completion of the DG Framework and to continue collaboration between Med-QUEST HAO staff, UH project staff, PMO and the DG vendor to complete the processes and deliverables and gain HAO approval of the DG Framework.</p>	Data 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>December Status Update:</b> UH continues to make staffing progress. They are currently recruiting for three open positions (Jr Data Analyst, Senior Data Analysts, and Jr Data Governance Specialist) and they are holding internal discussions to identify ways to expand their current resource pool. The DG vendor is developing a mitigation plan for a critical team member that is leaving the project. There was no reported staffing changes for AHCCCS or the HAO in this reporting period.</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

The background is a solid blue color. It features several decorative elements: a cluster of white-outlined squares of various sizes in the upper-left quadrant; a single white-outlined square in the middle-right area; and several semi-transparent blue squares scattered across the lower-right and bottom portions of the page. The text 'IV&V Status' is positioned in the lower-left area.

# 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 November Draft and Final IV&V Monthly Status Report were delivered on-time. The draft Quarterly Assessment Report was delivered to the HAO and PMO Vendor on December 21, 2022. This is the first Quarterly Assessment Report for the HAP program and in consideration of the holidays, IV&V intends to finalize the report in early January 2023.
IV&V Staffing		There are no IV&V staffing updates in this reporting period.
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 December reporting period:
  - The Draft and Final November 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
  - Developed a list of considerations for the HAP Operations and Maintenance plan
  - Delivered the draft first Quarterly IV&V Assessment Report.
- Planned IV&V activities for the January 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
  - Conduct any necessary planning for the HAP Annual Conference
  - 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
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
DG Weekly Status Report - Multiple	N/A	N/A
Data Governance Program Charter	08/12/2022	N/A
UH Weekly Status Report - Multiple	N/A	N/A
HAP PMO Vendor Meeting Minutes – Multiple	N/A	N/A
Data Governance Needs Assessment Methodology	07/19/2022	N/A
Data Governance Orientation Program Methodolog	07/22/2022	N/A

# Deliverables and Artifacts Reviewed



Deliverable or Artifact Name	Deliverable Date	Version
University of Hawai'i TASI/PHIDCVisioning Plan	07/12/2022	1.0
Multiple Data Source Specifications	N/A	N/A
AHCCCS_HealthCurrent_Extracts	N/A	N/A
University of Hawai'i TASI/PHIDC Quality Assurance Plan	07/22/2022	1.1
Data Governance Program Charter	06/07/2022	1.0
UH User Acceptance Testing Plan	7/5/2022	0.1
RFP-MQD-2021-016 Data Governance Implementation for Analytics Platform with Appendices.pdf	04/9/2021	N/A
RFP-MQD-2021-016 Data Governance Amendment #1 with Appendix J.pdf	04/27/2021	N/A
RFP-MQD-2021-016 Data Governance QA Doc Due Apr 27 final.pdf	04/27/2021	N/A
Freedman HealthCare Response to RFP-MQD-2021-016 REDACTED OPERATIONAL PROPOSAL.pdf	05/17/2021	N/A
Freedman HealthCare Response to RFP-MQD-2021-016 Cost Proposal Revised 060221.pdf	06/02/2021	N/A
RFP-MQD-2021-017 Med-QUEST Project Management For Health Analytics Program & Appendices A-I.pdf	05/19/2021	N/A



# Deliverables and Artifacts Reviewed



Deliverable or Artifact Name	Deliverable Date	Version
UH Contract DHS-21-MQD-0108	05/17/2021	N/A
UH Supplemental Contract DHS-21-MQD-0108/70139	03/17/2022	N/A
Task Order MQD-2021-015 Med Quest IDAP – Initial Build	02/11/2022	N/a
Draft Updated Advanced Planning Document	N/A	N/A
Draft HAP Technology Governance Charter	10/2022	V1.0
HAP_PMO – State Technical Sponsors PPT	12/16/2022	
IDAP State Technical Sponsor excel – RACI - Draft work in progress	12/16/2022	
HI APDU_draft	12/13/2022	Draft
CMS Github and SMC SMDL letter review	12/14/2022	
CMS-Conditions for Enhanced Funding	12/14/2022	
HAP_PMO-IDAP Pre Implementation Checklist	9/2/2022	V1.0
HAP_IDAP- Symmetry 120 Technical	2022	V12.0
HAP_UH-Del 8 Workflow Business Process Plan	12/12/2022	V2.0

# Additional Inputs



## Meetings and/or Sessions Attended/Observed:




1. HAO/PMO and IV&V Weekly Touch Base – 12/05/2022, 12/12/2022, 12/19/2022
2. IV&V Team Meeting – 12/12/2022, 12/19/2022, 11/21/2022
3. IV&V Internal Review of Draft Quarterly Assessment Report – 12/05/2022
4. IVV HAP Monthly Status Report Review – 12/13/2022
5. HAP-HAO All-Hands Call – 12/07/2022, 12/14/2022, 12/21/2022
6. HAP\_DG - Biweekly HAO/PMO/DG Touchpoint – N/A
7. HAP Operations Plan UH/PMO/IV&V – 12/05/2022
8. HAP\_AHCCCS - Data Solutioning – 12/01/2022, 12/16/2022
9. HAP\_PMO- State Technical Sponsor - INTRODUCTION MEETING – 12/16/2022
10. HAP\_UH – Deliverable Review – 12/05/2022, 12/12/2022
11. HAP\_DG Weekly Checkpoint – 12/01/2022, 12/06/2022, 12/15/2022
12. HAO/IV&V Check-in – 12/07/2022



# Appendices



# Appendix A – IV&V Criticality Ratings

Criticality Rating	Definition
	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.
	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.
	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**