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February 21, 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 (Feb 21, 2024 12:28 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 July 2023

Report Date: July 31, 2023

PUBLIC CONSULTING GROUP

Solutions that Matter

Overview

- Executive Summary
- IV&V Findings and Recommendations
- IV&V Engagement Status
- Appendices
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  - B – Risk Identification Report
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PUBLIC CONSULTING GROUP
Solutions that Matter

Executive Summary

Executive Summary

In July 2023, the State of Hawai'i Health Analytics Program (HAP) Integrated Data and Analytic Platform (IDAP) moved forward with evaluating two (2) Data Governance (DG) tools with proofs of concepts and demonstrations. Although the integrated master schedule (IMS) largely focuses on data set importation and deliverables, it is not yet baselined due to additional scope items that support the IDAP implementation. The schedule is set to be baselined after further discussions transpire between the State and IDAP DDI Vendor. IV&V will continue to monitor the project's pace and track key system development life cycle (SDLC) activities. During this month, work continued to establish the DG Framework. Hawai'i Analytics Office (HAO) is working on an Request for Proposal (RFP) to procure DG Vendor(s) and has early RFP draft. HAO has incorporated lessons learned and plans to publish an RFP by August 1, 2023. University of Hawai'i (UH) identified 1000+ Flags & Indicators in 2022 and will deliver a list of 300 Flags & Indicators by August 14th, 2023, which the IDAP DDI Vendor must build into the data model and deliver as part of Task Order 1. This work will have impacts on data quality, the completion of the data model, and the project schedule.

The project continues to leverage existing vendors to perform work where needed. IV&V reduced *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* to a severity of Low due to the State managing resources effectively. IV&V will continue to monitor how the State leverages and reinforces resources to perform critical tasks. IV&V is reducing *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* to the severity of Medium due to the Project making substantial progress on flags and indicators and data source testing as well as planning for data processes and documentation. IV&V did not open any new findings during this period.

April	May	Jun	Category	Health of Active Aspects	IV&V Observations
L	L	L	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

Apr	May	Jun	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.
M	M	M	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*
Significance: 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. 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. **July 2023 Status Update:** The critical resource roles are identified and supported by existing stakeholders. IV&V will continue to monitor the project's ability to manage resource needs.	L

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 20 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*
Significance: 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. **July 2023 Status Update:** The Data Governance Charter and hierarchy are complete. The project is evaluating potential DG tools and continues to build out the DG Framework. IV&V will continue to monitor progress on the development of the Data Governance Framework.	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 20 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*
Significance: 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. **July 2023 Status Update:** UH will provide the IDAP DDI Vendor with 300 flags and indicators for the data model. IV&V will continue to monitor activity related to coordination and completion of Data Management activities. IV&V is reducing this preliminary concern to the severity of Medium due to the Project making substantial progress on flags and indicators and data source testing as well as planning for data processes and documentation.	M

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.	In-Progress

** Refer to Slide 20 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*
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/JPASS sessions will encourage more comprehensive elicitation sessions and business requirements. **July 2023 Status Update:** Six personas were identified. IV&V will examine the user types and the project's OCM plans for activities for user readiness. The OCM newsletters have been successfully distributed and informative. IV&V reducing this preliminary concern to a severity of Low due to the PMO producing artifacts which support Stakeholder identification and outreach as well as the planning to engage end users through OCM activities.	L

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 20 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
4	Project Management	Lack of program roles and responsibilities may cause rework or gaps in planned activities and tasks.	Preliminary Concern	The PMO built a section within the HI HAP Repository for a Stakeholder Registry, which identifies detailed stakeholder information.	6/30/2023
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.*

IV&V Status

IV&V Engagement Status

IV&V Engagement Area	July	Comments
IV&V Budget		IV&V waiting for CMS review and approval of the FY24 IV&V contract amendment.
IV&V Schedule		There are no IV&V schedule updates in this reporting period.
IV&V Deliverables		IV&V finalizing deliverables with HAO for FY24.
IV&V Staffing		No IV&V resource changes.
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.

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

IV&V activities in the July reporting period:

- Continue attending project meetings
- Continue conducting check-in meetings with HAO and PMO Vendor
- Conduct deep analysis of project documentation
- Prepare for next IV&V Quarterly Assessment Report (July – September 2023)
- Finalize IV&V Monthly Status Report

Planned IV&V activities for the August reporting period:

- Continue attending project meetings
- Continue conducting check-in meetings with HAO and PMO Vendor
- Conduct deep analysis of project documentation
- Conduct analysis for upcoming IV&V Quarterly Assessment Report (July – September 2023)
- Develop August 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)
Official Minutes, Meeting Notes, and Documents Reviewed		
1	HAP DDI Discussion – Topic: System Architecture Meeting Minutes	3/20/2023 3/21/2023 3/22/2023 3/23/2023
2	HI HAP Software and Services Artifact	3/24/2023
3	HAO PMRS – Data Governance Meeting and Transcript	7/3/2023
4	HAP DDI POC and State Testing Criteria	7/5/2023
5	HAP IDAP Data Governance Proof of Concept Kick off: Ataccama Meeting	7/5/2023
6	HAP IDAP Data Governance Proof of Concept Ataccama User Story Demo and Q&A Meeting	7/5/2023 7/7/2023
7	HAP PMO – Mid Year Review Timeline 2023 - Template	7/6/2023
8	HAP IDAP Data Governance Proof of Concept Discussion of Testing Approach Meeting	7/7/2023
9	DDI HPMMIS Extract Work Sessions Minutes	7/7/2023 7/21/2023
10	KOLEA Discussion Minutes	7/10/2023 7/17/2023 7/24/2023 7/31/2023

Deliverables and Artifacts Reviewed

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

#	Documents/ Artifacts	Document Date(s)
Official Minutes, Meeting Notes, and Documents Reviewed		
11	HAO AHCCCS Data Extract Weekly Status Report	7/10/2023
12	HAP DDI Bi-Weekly Status Report	7/10/2023 7/24/2023
13	Task Order 1 Extracts	7/11/2023 7/18/2023 7/25/2023
14	Data Governance RACI	7/11/2023
15	Optum and NTT with Collibra Only HAP IDAP Data Governance Proof of Concept Collibra Meeting	7/12/2023 7/13/2023
16	HAP PMRS – Governance Charter Principles	7/13/2023
17	HAP IDAP BI Dashboard Design Dashboard 1- Eligibility and Enrollment Presentation	7/13/2023
18	HAP IDAP Data Governance Proof of Concept Collibra User Story Demo and Q&A Meeting	7/14/2023 7/19/2023
19	POC Internal Discussion Minutes	7/17/2023 7/24/2023 7/31/2023
20	Optum and NTT with Collibra Only HAP IDAP Data Governance Proof of Concept Collibra Meeting and Notes	7/17/2023 7/24/2023

Deliverables and Artifacts Reviewed

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

#	Documents/ Artifacts	Document Date(s)
Official Minutes, Meeting Notes, and Documents Reviewed		
21	HAP PMO –MQD CMS Monthly Status Report for June 2023	7/17/2023
22	HAP PMRS Del 6.1.1 Monthly Status Report June 2023	7/17/2023
23	Interim CCB Minutes	7/19/2023
24	MCO Quality Extracts – Design Session	7/21/2023 7/28/2023
25	HAP UH BI Dashboard – Example Dashboard Pros and Cons Artifact	7/25/2023
26	Data Governance Charter Hawaii MQD Draft v.1	7/27/2023
27	HAP PMO – Del 5.01 Monthly Status Report v2 202306 – Comment Log	7/27/2023

Additional Inputs

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

#	Meetings and Work Sessions Attended	Dates
1	HAP IDAP Data Governance Proof of Concept: Ataccama - User Story Demo & Q&A	7/5/2023 7/7/2023 7/10/2023
2	HAP IDAP Data Governance Proof of Concept: Discussion of Testing Approach	7/7/2023
3	HAP AHCCCS - Data Solutioning	7/7/2023 7/21/2023
4	HAP DDI – Bi-Weekly Status Discussion	7/12/2023 7/26/2023
5	HAP IDAP Data Governance Proof of Concept: COLLIBRA - User Story Demo & Q&A	7/14/2023 7/19/2023 7/21/2023
6	HAP IDAP BI Dashboard Design Discussions	7/14/2023 7/18/2023 7/20/2023
7	HAP IDAP Training Assessment	7/17/2023
8	HAP IDAP Portal Design Session: Information Repository	7/19/2023 7/26/2023
9	HAP DDI - UH and Optum - Reference, Flags, Indicators	7/21/2023
10	HAP PMO - UH Touchpoint	7/24/2023 7/31/2023

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

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

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