JOSH GREEN, M.D.
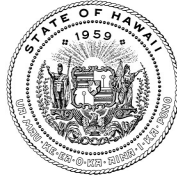GOVERNOR
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STATE OF HAWAIʻI | *KA MOKUʻĀINA O HAWAIʻI*
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES | *KA ʻOIHANA LOIHELU A LAWELAWE LAULĀ*

OFFICE OF ENTERPRISE TECHNOLOGY SERVICES | *KEʻENA HOʻOLANA ʻENEHANA*
P.O. BOX 119, HONOLULU, HAWAII 96810-0119

January 17, 2025

The Honorable Ronald D. Kouchi
President of the Senate
and Members of the Senate
Thirty-Third State Legislature
State Capitol, Room 409
Honolulu, Hawaiʻi 96813

The Honorable Nadine K. Nakamura
Speaker and Members of the
House of Representatives
Thirty-Third State Legislature
State Capitol, Room 431
Honolulu, Hawaiʻi 96813

Aloha Senate President Kouchi, Speaker Nakamura, 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 Hawaiʻi, Department of Health, BHA Integrated Case Management System Project.

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

Sincerely,

Christine M. Sakuda
Chief Information Officer
State of Hawaiʻi

Attachments (2)

Hawaii BHA Integrated Case Management System Project – *Phase 4*

IV&V Report for the period of

December 1 – December 31, 2024

Final Submitted: January 15, 2025

PUBLIC CONSULTING GROUP

Solutions that Matter

Agenda

Executive Summary

IV&V Findings & Recommendations

Appendices

- A – Rating Scales
- B – Inputs
- C – Project Trends
- D – Acronyms and Definitions

Executive Summary

The project continues to make progress with INSPIRE system enhancements, including the new AER functionality, which is currently in the testing phase. IV&V remains concerned with the occurrence of defects in the production environment (otherwise known as "leakage"), particularly related to calculator functionality. Further, there seems to be a lack of clarity around whether the hours spent repairing defects are provided at no additional cost or if the System Integrator (SI) is using User Story Points initially allocated for new functionality to address defect repairs.

Automated regression testing continues to be on hold due to testing tool challenges. Due to BHA project team constraints, existing automated regression testing scripts remain unrepaired, hindering test productivity and overall quality. IV&V remains concerned that the limited availability of BHA project resources could continue to negatively impact the project, resulting in further delays and diminishing the quality of BHA testing activities, code reviews, and security policy updates. The project is working to further enhance code quality and is considering adopting code quality tools to support these improvements.

IV&V remains concerned with scope creep related to FHIR functionality, lack of governance around defect management and production system restarts, and Med-QUEST claims' challenges that could affect the project budget.

Executive Summary

Oct	Nov	Dec	Category	IV&V Observations
Y	Y	Y	**Sprint Planning**	Sprint reviews and demos are currently conducted in an ad hoc manner. The project plans to incorporate calculator demonstrations to enhance visibility of progress and address ongoing issues with the calculator and provider portal. IV&V observed two CAMHD backlog prioritization meetings and will continue to monitor the process regularly. While CAMHD and DDD are generally satisfied with the backlog prioritization, there are areas for improvement, particularly in balancing input from a broader user base and ensuring that federal compliance and performance-related features are given appropriate attention in the backlog. By refining these aspects, both teams can improve the backlog prioritization process.
G	G	G	**User Story (US) Validation**	There are no active findings in the User Story (US) Validation category, which remains Green (low criticality) for the September reporting period. IV&V will continue to monitor the US development and validation process in upcoming reporting periods.
Y	Y	Y	**Test Practice Validation**	The project is working to enhance code quality and is considering adopting code quality tools to support these improvements. The project utilized the Tosca automated regression testing tool for earlier Phase 4 releases. Due to BHA project team constraints, existing automated regression testing scripts remain unrepaired, which has hindered test productivity and overall quality. IV&V provided a list of testing topics for the Systems Integrator (SI) to work on during the Development, Design, and Implementation (DD&I) phase. The SI, however, focused on the M&O phase and did not include updated documentation. BHA has communicated to the SI that the project has always been in DD&I and the project can only transition to the Maintenance and Operations (M&O) phase after CMS has certified INSPIRE/MAX. IV&V will keep discussing with BHA to help move forward the SI's testing efforts.

Executive Summary

Oct	Nov	Dec	Category	IV&V Observations
Y	Y	Y	**Release / Deployment Planning**	The Root Cause Analysis (RCA) for a medium-severity defect, fixed on October 24, 2024, was due to missing workflows. R4.9 was deployed on December 5, 2024, followed by a mid-sprint deployment on December 16, 2024. The IV&V team will monitor both deployments. DDD is working with stakeholders to determine the direction and next steps on the digitization initiative.

Executive Summary

Oct	Nov	Dec	Category	IV&V Observations
G	G	G	**On-The-Job-Training (OJT) and Knowledge Transfer (KT) Sessions**	This category remains Green (low criticality) for the December reporting period with no active findings.
G	G	G	**Targeted KT**	This category remains Green (low criticality) for the December reporting period. IV&V will continue to monitor.
G	G	G	**Project Performance Metrics**	There are no project performance metrics to report for the December reporting period. IV&V will keep this category's criticality rating Green (low criticality) and will continue to monitor.
G	G	G	**Organizational Maturity Assessment (OMA)**	This category remains Green (low criticality) for the December reporting period. There are no outstanding findings in this category, and IV&V will continue to monitor.

Executive Summary

Oct	Nov	Dec	Category	IV&V Observations
Y	Y	Y	**Project Management**	As of the end of this reporting period, There are 19 unresolved defects (18 medium, 1 high), as BHA prioritizes higher-severity tasks. Both IV&V and BHA are concerned about code quality issues and are considering using SonarQube for improvement. Microsoft tested the CAMHD functionality for MAX and Provider Portal with user loads of 100, 200, and 300. The performance report indicated consistent response times, but exceeding 200 users caused degraded performance due to the portal running in trial mode. Further testing will occur after the R4.9 deployment when the portal transitions to production mode, and results for DDD functionality are expected in January 2025. IV&V advises prioritizing the completion of testing and reporting results. IV&V remains concerned with scope creep related to FHIR functionality, lack of governance around defect management and production system restarts, and Med-QUEST project claims' challenges. There seems to be a lack of clarity around whether the hours spent repairing defects are provided at no additional cost or if the System Integrator (SI) is using User Story Points initially allocated for new functionality to address defect repairs.

Executive Summary

Oct	Nov	Dec	Category	IV&V Observations
Y	Y	Y	**Resource Management**	IV&V remains concerned that the limited availability of BHA project resources could continue to negatively impact the project, resulting in further delays and diminishing the quality of BHA testing activities, code reviews, and security policy updates.

Executive Summary

As of the December 2024 reporting period, fifteen (15) open findings were updated – Nine (9) Medium Issues, two (2) Medium Risks, one (1) Low Issue, and three (3) Preliminary Concerns spread across the Release/Deployment Planning, Test Practice Validation, Sprint Planning, Project Management, and Resource Management assessment areas are currently open.
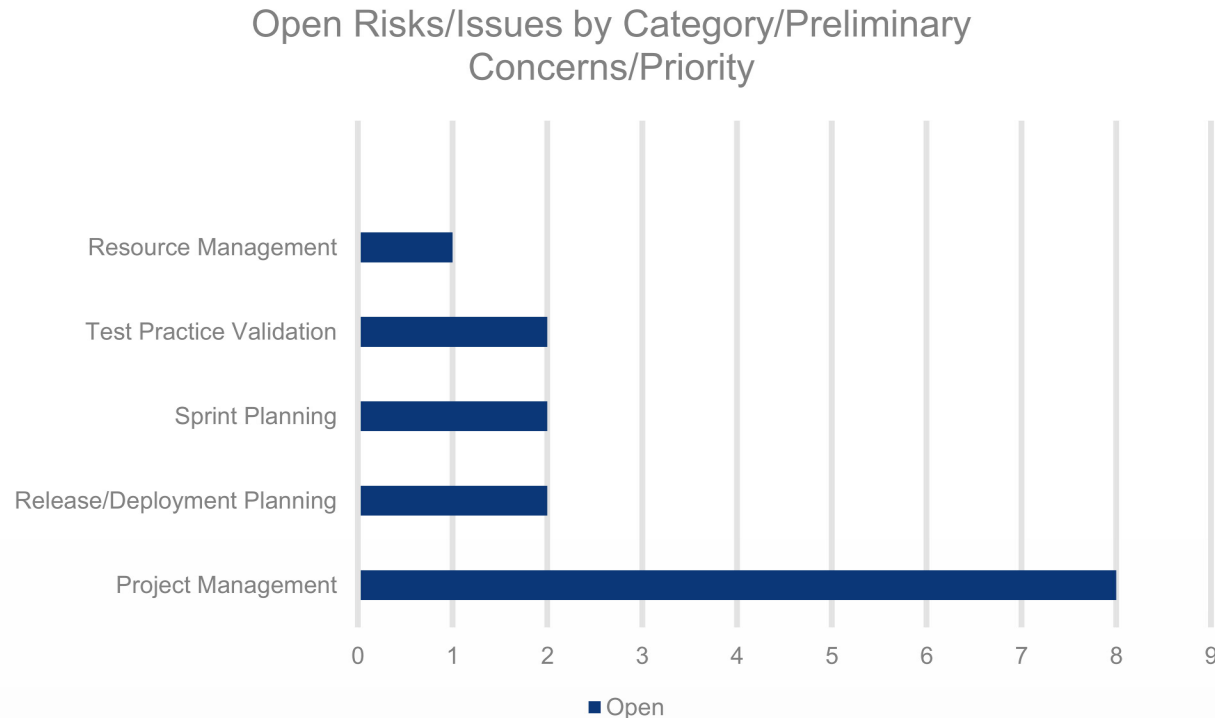
Open Risks/Issues by Category/Preliminary Concerns/Priority

■ Open

IV&V Findings & Recommendations

IV&V Findings & Recommendations

Assessment Categories

Throughout this project, IV&V verifies and validates activities performed in the following process areas:

- Sprint Planning

- User Story Validation

- Test Practice Validation

- Release / Deployment Planning

- On-the-Job Training (OJT) and Knowledge Transition (KT) Sessions

- Targeted Knowledge Transition (KT)

- Project Performance Metrics

- Organizational Maturity Assessment

- Project Management

- Resource Management

IV&V Findings & Recommendations

Sprint Planning

#	Key Findings	Criticality Rating
31	**Medium Risk**: A lack of regular Sprint Reviews and Sprint Demos will likely lead to misalignments between delivered work and stakeholder needs. **Finding Update:** IV&V was informed that sprint reviews and demos are currently conducted on an ad hoc basis. To improve the process, the project is planning to incorporate the demonstration of Calculator functionality into sprint reviews and demos. This would provide valuable visibility into the progress and help address ongoing issues with the calculator and provider portal, which are identified as frequent problem areas.	M

Recommendations	Status
According to Agile Best Practices, IV&V recommends including Sprint Reviews and Demos in future releases (R4.2 and onwards). At the end of each sprint, conduct a sprint review meeting to demonstrate the completed work to stakeholders and gather feedback. Use this feedback to refine and reprioritize the product backlog. For a two-month sprint, IV&V recommends having more than one (1) demo during the sprint.	In Progress
Create a stakeholder register to identify all stakeholders. List their identification, assessment, and classification. Review the register regularly to plan appropriate stakeholder engagement.	In Progress
Foster active participation from users and stakeholders during both Sprint Reviews and Sprint Demos. Emphasize the value of iterative feedback to guide development and ensure that user needs are consistently met.	In Progress

IV&V Findings & Recommendations

Sprint Planning (cont'd)

Recommendations	Status
Establish standardized communication protocols for both Sprint Reviews and Sprint Demos. Encourage teams to deliver concise and informative progress reports, including achievements, challenges, and plans. This will enhance stakeholder engagement and project transparency.	In Progress
Institute a structured documentation process for Sprint Reviews and Sprint Demos. Document key decisions, action items, and insights from each session to ensure accountability and to support ongoing process improvement.	In Progress

IV&V Findings & Recommendations
Sprint Planning (cont'd)

#	Key Findings	Criticality Rating
41	**Medium Risk:** The absence of separate dedicated product backlog review meetings can lead to unclear priorities, misalignment with stakeholders, inadequate refinement, and increased risk of scope creep. **Finding Update**: IV&V observed two CAMHD backlog prioritization meeting and will continue to monitor the process regularly. While CAMHD and DDD are generally satisfied with the backlog prioritization, there are areas for improvement, particularly in balancing input from a broader user base and ensuring that federal compliance and performance-related features are given appropriate attention in the backlog. By refining these aspects, both teams can improve the backlog prioritization process.	Ⓜ

Recommendations	Status
Separate dedicated product backlog review meetings (during Sprints) would allow clarifying any ambiguities or uncertainties, re-prioritization, estimation and refinement of backlog items. This would allow the project team to avoid situations where decisions about including items mid-Sprint would have to be taken.	Open
IV&V recommends scheduling separate dedicated product backlog review meetings (during Sprints) where all relevant stakeholders are invited to review the product backlog and scheduled at the appropriate time(s) such that there is sufficient time to plan the design, development, and implementation (DDI) of the next release(s).	Open

IV&V Findings & Recommendations
Test Practice Validation

#	Key Findings	Criticality Rating
2	**Medium Issue:** As a result of regression testing not being consistently performed, production releases are breaking existing functionality in the production environment. **Finding Update:** R4.9 regression testing was conducted manually from 11/25/2024 to 12/4/2024, identifying one (1) defect. However, users encountered three (3) production defects in R4.9. IV&V remains concerned about the exclusive reliance on manual regression testing, which poses risks such as inefficiencies, human error, limited test coverage, and dependency on specific testers. IV&V recommends investing in automated regression testing to enhance efficiency, reduce the burden on BHA staff, and improve product quality. For R4.10, regression testing is planned for 1/29/2025-2/5/2025, with CAMHD utilizing TOSCA for automated regression testing and DDD relying solely on manual testing.	M

Recommendations	Status
To ensure effective Tosca testing, it is crucial for both divisions to align on a unified resource allocation strategy. Given the limited availability of resources, open communication and consensus-building are essential for optimizing tester utilization. By collaborating to prioritize testing efforts, share critical test cases, and identify overlapping areas, the divisions can achieve comprehensive regression testing without overburdening a single resource. This collaborative approach will balance workloads, streamline processes, and enhance test coverage, minimizing delays and bottlenecks. Ultimately, it will enable both divisions to efficiently meet their testing objectives.	Open
A balanced approach that combines manual and automated regression testing to ensure broad test coverage and flexibility.	Open

IV&V Findings & Recommendations

Test Practice Validation (cont'd)

Recommendations	Status
Having board(s) in Azure DevOps or a document on SharePoint that provides information about the status of regression testing automation, to facilitate visibility and transparency to BHA project personnel and stakeholders.	In Progress
Schedule priorities should be reevaluated by distributing the work according to the resource bandwidth. This will ensure that the schedule is not impacted and that the work is done efficiently between regression testing and Golden Record (GR) tasks.	In Progress
Pursue and complete additional formal training in Azure DevOps and Tricentis for test automation as soon as possible and complete efforts to automate the two primary regression test scripts.	In Progress
Determine if current regression testing timeframes are adequate, and if not, add more time to the pre-production regression test efforts for all release deployments.	In Progress

IV&V Findings & Recommendations
Test Practice Validation (cont'd)

#	Key Findings	Criticality Rating
40	**Medium Issue:** Insufficient testing processes can lead to poor-quality software, project delays and extended user acceptance testing. **Finding Update:** IV&V provided a list of testing topics for the SI to address during the current DD&I phase of the project. However, the SI's response focused on the M&O phase rather than DD&I and did not reference updated documentation. BHA has communicated to the SI that the project has always been in DD&I and the project can only transition to the Maintenance and Operations (M&O) phase after CMS has certified INSPIRE/MAX. In addition to updated documentation, IV&V continues to request a walkthrough meeting to further understand the testing process. IV&V will continue discussions with BHA to ensure progress is made in advancing the SI's testing efforts.	Ⓜ

Recommendations	Status
IV&V has requested an overview of the testing process, with a focus on process such as tracking test coverage and requirements traceability.	In Progress
A Stakeholder Register helps identify and understand all project stakeholders, ensuring their needs are met and risks are managed through effective communication. A RACI clarifies roles and responsibilities, improving collaboration, decision-making, and resource management, which are all critical for the success of IT projects.	In Progress
Identify stakeholders (output is Stakeholder Register) and develop a RACI matrix for testing.	In Progress
Review the overall testing process and implement any needed improvements identified.	Open

IV&V Findings & Recommendations

Release / Deployment Planning (cont'd)

#	Key Findings	Criticality Rating
39	**Low Issue:** Due to on-going deployment processes and technical execution issues, the Project may continue to encounter defects and challenges, e.g., when releases are in production or in meeting projected timelines for production and non-production deployments. **Finding Update:** The Root Cause Analysis (RCA) for the medium-severity defect (addressed with a hotfix deployed on 10/24/2024) identified it as deployment-related (related to missing/removed workflows). R4.9 was deployed to production on 12/5/2024, followed by a mid-sprint deployment (MSD) with two user stories on 12/16/2024. IV&V will monitor the quality of both the R4.9 deployment and the MSD.	L

Recommendations	Status
The project should consider automating deployments for resource savings, increased efficiency, consistency, faster time to market, improved collaboration and reliability, scalability, version control integration, and rollback capability.	Open
Ensure there are adequate and qualified resources to support the current deployment processes. This may require support from RSM resources to provide assistance and knowledge transfer for some more complex deployment components.	Open

IV&V Findings & Recommendations
Release / Deployment Planning (cont'd)

Recommendations	Status
As appropriate, consult with RSM on best practices that BHA could employ to support deployment.	Open
Request the assistance of the RSM Solution Architect in reviewing and correcting issues associated with the consistency of configurations across environments, ensuring that the test environment is capable of testing ALL functions of any given release without the need for using multiple test environments.	Open
Request assistance from the RSM Solution Architect in reviewing deployment scripts to double-check for accuracy and completeness before commencing deployment activities.	Open
The Project Team should consider evaluating potential changes to improve/enhance existing processes and communications to address current release/deployment shortfalls.	Open
IV&V recommends performing a Root Cause Analysis (RCA) in collaboration with RSM for the continued concerns surrounding environment differences.	Open
IV&V recommends updating the Project's Configuration Management Plan to address the current needs of the Project. This should include specific checklists geared at ensuring repeatable promotional processes by DOH.	Open
Look at implementing 'hard' code freeze dates as well as test environment deployment dates to ensure that testing and deployment activities are not rushed.	Open
Ensure an operational and fully functional test environment is available to effectively conduct end-to-end regression testing prior to deploying a release to production.	Open
Develop a plan to institutionalize the execution of smoke testing for promotions to non-production and production environments. This will help to ensure that all components needed to test have been properly deployed prior to the actual execution of test activities.	Open

IV&V Findings & Recommendations

Release / Deployment Planning

#	Key Findings	Criticality Rating
43	**Medium Issue:** Execution time for the process for updating DDD SharePoint folders was unacceptable. **Finding Update:** DDD is working with stakeholders to determine the direction and next steps on the digitization initiative.	Ⓜ

Recommendations	Status
IV&V recommends doing an impact analysis, e.g., downstream impact.	Open
IV&V recommends that DDD puts on hold any development utilizing Power Automate for the performance issue encountered in production (marked "TBD" in finding #14 related to "SharePoint Bulk Flows still running") and related User Stores, e.g., "Changes to DDD folders," and defects.	Open
IV&V recommends evaluating other feasible options, e.g., leveraging SharePoint tools and best practices.	Open
A project issue should be opened to identify and manage the resolution of this issue.	Open

IV&V Findings & Recommendations
Project Management (cont'd)

#	Key Findings	Criticality Rating
14	**Medium Issue:** Due to multiple quality concerns, the project may continue to face impactful system defects. **Finding Update:** R4.9 was deployed to production on 12/5/2024, with successful smoke testing completed on 12/6/2024. A mid-sprint deployment with two (2) user stories followed on 12/16/2024. Currently, 19 production defects remain unresolved (18 medium severity, 1 high severity) despite thorough testing. The SI stated that BHA prioritizes higher-priority tasks, leaving lower-priority defects unaddressed. The SI is working to resolve these issues, IV&V and BHA remain concerned about ongoing code quality problems and their impact on users. BHA is considering utilizing tools such as SonarQube for continuous inspection and improvement of code quality.	Ⓜ

Recommendations	Status
The project utilize tools such as SonarQube for continuous inspection of code quality and establishing a source code quality threshold to maintain high-quality, secure, and maintainable code.	Open
The project increases comprehensive testing prior to joint testing to reduce the burden on BHA testers and reduce post-production defects.	Open
The SI vendor add a "Found In" column to the daily scrum file to indicate the environment where each defect was identified.	In Progress
The SI vendor provides the total number of defects in production and reports these numbers regularly to BHA.	In Progress
Evaluate existing project staff skills and experience levels to ensure they meet BHA support requirements.	In Progress
Perform CAMHD revenue neutrality fiscal balance testing on a quarterly basis to ensure revenues are as expected	In Progress

IV&V Findings & Recommendations

Project Management (cont'd)

#	Key Findings	Criticality Rating
33	**Medium Issue:** Performance bottlenecks with the INSPIRE production environment may result in low productivity and poor user experience. **Finding Update:** Microsoft conducted performance testing for CAMHD functionality (MAX and Provider Portal) with 100, 200, and 300 users and delivered the performance report. According to the report, response times for MAX and INSPIRE remained consistent during each test. However, volumes at 300 portal users exceeded 2x the current production load, which Microsoft attributed to the portal running in trial mode. This caused degraded response times once user volume surpassed 200. Microsoft plans to conduct another round of testing after the R4.9 deployment once the portal environment is switched to production mode. Additionally, Microsoft is performing performance testing for DDD functionality and expects to deliver the results in January 2025. IV&V recommends that the project continues to prioritize completion of the testing and providing the results.	Ⓜ

Recommendations	Status
IV&V recommends: BHA execute a performance test during the development of R4.6 (planned completion 5/20/2024), identifying test cases and scenarios that include both DDD and CAMHD functionality, transactions/functionality that are performance intensive, e.g., calculator functionality	In Progress
Conduct load and performance testing for each release that has significant new features/functionality, e.g., Calculator-related transactions.	Open
Create a plan for comprehensive performance testing and address any performance bottlenecks.	Open
Have the benchmark assessments done annually and implementation of Azure App Insights for Power Platform.	Open
Execute test scripts that measure the run-time for execution of long-running transactions. E.g., Calculator functionality/transactions and monitoring results over time.	Open

IV&V Findings & Recommendations

Project Management (cont'd)

#	Key Findings	Criticality Rating
42	**Medium Issue:** Lack of effective governance and communication among stakeholders can have significant negative impacts on a project in several ways. **Finding update:** Recent discussions between BHA and the SI during this reporting period indicate that BHA is utilizing additional User Story Points (USPs) to investigate and resolve defects from recent releases, such as R4.8. Based on earlier discussions with BHA, IV&V understands that a warranty period applies to such defects, meaning the vendor should not charge BHA additional costs for their resolution. However, the SI has stated that there is no warranty period. IV&V and BHA will review the contractual terms and continue discussions in January 2025. The ultimate goal of this discussion is that all stakeholders have a common understanding of the current contractual terms & conditions governing defect fixing and how defect fixing will be addressed in the future.	(M)

Recommendations	Status
Create a Governance Structure: Implement a governance structure that defines decision-making processes, escalation procedures, and accountability mechanisms. Clarify how decisions will be made, who has authority, and how issues will be resolved.	Open
Develop a Stakeholder Registry, RACI Matrix, and Stakeholder Engagement Plan: Identify key stakeholders and develop a plan to engage them throughout the project lifecycle. Tailor communication strategies to address the needs and preferences of different stakeholders, ensuring their active involvement and support.	Open
Clearly Define Roles and Responsibilities: Clearly outlining the roles and responsibilities of each stakeholder involved in the project, would ensure that everyone understands their duties and how they contribute to the project's success.	Open

IV&V Findings & Recommendations
Project Management (cont'd)

Recommendations	Status
Encourage Open Communication and Feedback: Foster a culture of open communication and feedback where stakeholders feel comfortable sharing their thoughts, concerns, and suggestions. Encourage constructive dialogue and actively seek input to improve decision-making and problem-solving. Keep stakeholders informed about project progress, milestones, and key developments through regular updates and progress reports. Highlight achievements, challenges, and any changes to the project plan or scope.	Open
Resolve Conflicts Promptly: Address conflicts and disagreements among stakeholders promptly and professionally. Encourage dialogue, active listening, and compromise to find mutually acceptable solutions that support project goals.	Open
Manage Expectations: Manage stakeholders' expectations by setting realistic timelines, budgets, and deliverables. Foster a culture of transparency about project constraints and risks and	Open
Evaluate and Adapt: Continuously evaluate the effectiveness of governance and communication processes and adjust as needed. Solicit stakeholders' feedback to identify areas for improvement and continuously refine your approach.	Open

IV&V Findings & Recommendations
Project Management (cont'd)

#	Key Findings	Criticality Rating
45	**Preliminary Concern:** The current process does not allow BHA to track actual costs versus budgeted costs by feature/functionality. The current invoices from the System Integrator (SI) vendor lack sufficient details that would allow BHA to track actual costs versus budgeted costs by, e.g., features such as Provider Portal, Maui Wildfire Communication, FHIR and Golden Record or by user story. **Finding update:** BHA has escalated Med-QUEST's ongoing challenges with tracking federal financial participation allotments and managing its claims submission process to the appropriate personnel. The deployment of Fast Healthcare Interoperability Resources (FHIR) has been postponed, with a new target date of January 2025. IV&V remains concerned that scope creep in FHIR development could delay the implementation of other system features, potentially impacting system performance, reducing user productivity, and increasing user frustration. PCG, BHA, and Med-QUEST are having ongoing discussions to resolve Med-QUEST's challenges with tracking federal financial participation allotments and managing its claims submission process.	N/A

IV&V Findings & Recommendations

Project Management (cont'd)

#	Key Findings	Criticality Rating
46	**Medium Issue:** Neglecting the established defect management process could lead to lost/forgotten defects, user frustration, and could slow resolution of similar defects in the future. **Finding Update:** During this reporting period, users encountered production issues related to the Calculator, including an inability to view active cases and resolved cases. However, the corresponding tickets were not promptly created in Azure DevOps (ADO). IV&V remains concerned about the project's non-adherence to the Defect Management process. IV&V and BHA will continue discussions to identify process gaps and determine next steps.	M

Recommendations	Status
IV&V recommends to: 1. Send communications to the project stakeholders to clarify the defect management process and the importance of logging all defects. 2. Take steps to assure current and new users understand how to report and/or log defects. 3. Consider designating a defect management lead or champion to oversee adherence to the process and assure all defects are logged. 4. Keep stakeholders informed about defect status, priority, impacts, and resolution timelines. This could increase awareness of the importance of logging defects. 5. Discuss ways to improve the defect logging and management process with the SI and come up with a plan to improve.	Open

IV&V Findings & Recommendations

Project Management (cont'd)

#	Key Findings	Criticality Rating
47	**Medium Issue:** The lack of a governance process for restarting production systems can impact service availability and frustrate end-users and hinder accountability. **Finding Update:** BHA suggested that the deployment team or the Help Desk team may be best suited to document the process. IV&V remains concerned that no further progress has been made and will continue to make recommendations on how BHA could resolve this issue and be prepared for a production restart.	Ⓜ

Recommendations	Status
IV&V recommends BHA 1. Develop standard procedures for system restarts, including pre-checks, step-by-step instructions, and post-restart verifications. 2. Require formal approvals before initiating a restart, especially for INSPIRE, and document all actions in a centralized system. 3. Define clear escalation paths for when restarts do not go as planned, including identifying contacts for technical support and management approval for additional interventions. 4. Automate Restart Procedures where possible. 5. The governance process is established, it should be effectively communicated to the project team. 6. Provide stakeholders with a clear explanation of the reason for the restart and the lessons learned, while documenting the restart details in the defect record.	Open

IV&V Findings & Recommendations

Project Management (cont'd)

#	Key Findings	Criticality Rating
48	**Preliminary Concern:** Some AER project requirements are reliant on data provided by external partners (e.g., Dept. of Human Services (DHS)). **Finding Update**: Med-QUEST has resolved the issue with mismatched file templates and fields and has communicated that no further changes will occur. The SI has validated that there are no discrepancies based on the December 2024 claims data and has also received the missing March 2024 claims data.	N/A

IV&V Findings & Recommendations
Project Management (cont'd)

#	Key Findings	Criticality Rating
49	**Preliminary Concern:** Multiple AERs for a single episode and false positives. **New Finding:** BHA remains concerned that the SI has yet to demonstrate that multiple AERs are not created for a single episode and that an AER record should match an unreported AER record. These concerns arise from the use of claims data to identify unreported AERs and to address false positives - events initially flagged as adverse but later determined not to be. If left unresolved, these issues could hinder the Case Managers' ability to effectively resolve unreported false positives.	

IV&V Findings & Recommendations
Resource Management

#	Key Findings	Criticality Rating
34	**Medium Issue:** A shortage of BHA project resources could lead to reduced productivity and project delays. **Finding Update:** IV&V is concerned that limited resources at BHA could cause project delays and affect system quality. For instance, IT staff and other departments have struggled to find time to update and create security policies, as these tasks have not been prioritized alongside their regular duties. BHA submitted requests for new positions, which the State did not approve. The hope is that filling a key position will help address this issue, allowing the new hire to take on policy drafting or free up others to focus on these critical tasks. While there are resources for specific tasks, only a few people have the necessary skills. Expanding this knowledge and responsibility across the team is a key part of their plan.	M

Recommendations	Status
Utilizing peer-to-peer knowledge sharing, allowing experienced team members to informally share their expertise during team meetings. Additionally, creating internal documentation that outlines best practices and processes for developing security policies would serve as a self-service resource for the team.	Open
DDD and CAMHD have further discussions to optimize resource utilization between the two divisions.	Open
BHA should explore options for offloading project team members' daily responsibilities to other staff.	In Progress
BHA should work quickly to create new positions and receive State approval.	In Progress
BHA should identify tasks and duties that they can ask the SI to assume, as permitted by the contract, which are presently being handled by BHA members.	In Progress
BHA should explore the use of contractors to fulfill the functions for open project positions.	In Progress

IV&V Findings & Recommendations
Project Performance Metrics

Metric	Description	IV&V Observations	IV&V Updates
Velocity	• Review and validate the velocity data as reported by the project • Verify the project is on pace to hit the total target number of US/USP	**December:** R4.9 was deployed to production on 12/5/2024. A mid-sprint deployment followed on 12/16/2024.	Velocity Metric Trends:

Release	Planned velocity	Actual velocity	Percentage attained
R4.9	111	71	64

Phase 4 Releases Cumulative Variance

Release	Planned velocity	Actual velocity	Cumulative variance
R4.1	309	114	-195
R4.2	85	174	-106
R4.3	85	124	-67
Golden Record Mid-Sprint Deployment (MSD)	0	68	1
R4.4	240	225	-14
R4.5	95	76	-33
R4.6	84	103	-14
R4.7	111	50	-75
R4.8	111	107	-79
4.9	111	71	-119

IV&V Findings & Recommendations
Project Performance Metrics (cont'd.)

Metric	Description	.	IV&V Updates
Defect Metrics	Understand and track the following: • Defects by category (bug fixes) • USPs assigned to defects in a release vs. USPs assigned to planned US in a release	December - Velocity was estimated at 111 USPs for R4.9, 71 R4.9 USPs were promoted to production on 12/5/24. 12 of the 71 USPs were for defect fixing. • 89% of the USPs were associated with user stories and requests. • 17%* of the total USPs were associated with defects encountered during the release effort or pulled from the defect backlog.	The defect percentage for December was 17%* which is under the target range of 20% or less of all USPs promoted to production.

Note*: This defect percentage does not include defects under warranty that are assigned zero (0) User Story Points.

Appendix A: IV&V Rating Scales

Appendix A
IV&V Rating Scales

This appendix provides the details of each finding and recommendation identified by IV&V. Project stakeholders are encouraged to review the findings and recommendations log details as needed.

- See Findings and Recommendations Log (provided under separate cover)
- IV&V Assessment Category Rating Definitions

G The assessment category is under control and the current scope can be delivered within the current schedule.

The assessment category's risks and issues have been identified, and mitigation activities are effective. The overall impact of risk and issues is minimal.

The assessment category is proceeding according to plan (< 30 days late).

Y The assessment category is under control but also actively addressing resource, schedule or scope challenges that have arisen. There is a clear plan to get back on track.

The assessment category's risk and/or issues have been identified, and further mitigation is required to facilitate forward progress. The known impact of potential risks and known issues are likely to jeopardize the assessment category.

Schedule issues are emerging (> 30 days but < 60 days late).

Project leadership attention is required to ensure the assessment category is under control.

R The assessment category is not under control as there are serious problems with resources, schedule, or scope. A plan to get back on track is needed.

The assessment category's risks and issues pose significant challenges and require immediate mitigation and/or escalation. The project's ability to complete critical tasks and/or meet the project's objectives is compromised and is preventing the project from progressing forward.

Significant schedule issues exist (> 60 days late). Milestone and task completion dates will need to be re-planned.

Executive management and/or project sponsorship attention is required to bring the assessment category under control.

Appendix A

Finding 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 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: Inputs

Appendix B
Inputs

This appendix identifies the artifacts and activities that serve as the basis for the IV&V observations.

Meetings attended during the December 2024 reporting period:

1. Daily Scrum Meetings
2. Daily Design Meetings
3. Twice Weekly RSM Issues Meeting
4. Weekly BHA-ITS Program Status Meeting
5. Bi-Weekly Check-in: CAMHD
6. Bi-Weekly Check-in: DDD
7. BHA (CAMHD & DDD) IV&V Joint Meeting
8. IV&V Draft IV&V Status Review Meeting with DOH
9. DOH BHA IT Solution Project – Steering Committee
10. US# Testing & Request Items
11. AER Analytics Bi-weekly Meeting

Artifacts reviewed during the December 2024 reporting period:

1. Daily Scrum Notes
2. Twice Weekly Issues Meeting Notes
3. Weekly BHA-ITS Program Status Report
4. Release 4.7 Release Notes
5. Hawaii DOH Design Document

Eclipse IV&V® Base Standards and Checklists

Document

Appendix C: Project Trends

Appendix C
Project Trends

	March	April	May	June	July	August	September	October	November	December
User Story Validation										
Test Practice Validation										
Sprint Planning										
Release / Deployment Planning										
OJT and KT Sessions										
Targeted KT										
Project Performance Metrics										
Organizational Maturity Metrics										
General Project Management										
Resource Management										
Total Open Findings	11	12	13	13	12	12	14	14	14	14
Issue - high	0	0	0	0	0	0	0	0	0	0
Issue - medium	8	8	8	8	8	8	10	10	10	10
Issue - low	0	1	1	1	1	1	1	1	1	1
Risk - high	0	0	0	0	0	0	0	0	0	0
Risk - medium	2	2	2	2	2	2	2	2	2	2
Risk - low	0	0	0	0	0	0	0	0	0	0
Preliminary Concern	1	1	2	2	1	1	2	2	2	2

Appendix D
Acronyms and Definitions

Acronyms	Definition
DOH	Department of Health
BHA	Behavioral Health Services Administration
CAMHD	Child & Adolescent Mental Health Division
FHIR	Fast Healthcare Interoperability Resources
DDD	Developmental Disabilities Division
USP	User Story Points
SME	Subject Matter Expert
SIT	System Integration Testing
MS	Microsoft
MSD	Mid Sprint Deployment
ADO	Azure DevOps
SLA	Service Level Agreement
RCA	Root Cause Analysis
UAT	User acceptance testing
OJT	On-the-Job Training
KT	Knowledge Transition
SFTP	Secure File Transfer Protocol
IV&V	Independent Verification and Validation
CMS	Centers for Medicare & Medicaid Services
AER	Adverse Events Report

Solutions that Matter

ID	Short Description	Finding Statement	Analysis and Significance	Recommendation	Finding Update	Category	Type	Priority	Status	Closed Date	Identified Date	Owner
2	Regression testing	As a result of regression testing not being consistently performed, production releases are breaking existing functionality in the production environment.	R3.3 introduced a defect that deprecated features in production specific to Integrated Support and Life Trajectory functionality. DDD has informed IV&V that there are other examples of functionality being deprecated after a release, some of which are still being investigated. As of this report, IV&V has not evaluated the project's root cause analysis (RCA) process used to determine why such functionality was deprecated but will discuss further with BHA in January 2020. Thorough vetting and validation of regression test cases are necessary to prevent defects when a release is pushed live. When defects occur in production, the project should follow a defined and repeatable process for determining the root cause of the problem.	1. To ensure effective Tosca testing, it is crucial for both divisions to align on a unified resource allocation strategy. Given the limited availability of resources, open communication and consensus-building are essential for optimizing tester utilization. By collaborating to prioritize testing efforts, share critical test cases, and identify overlapping areas, the divisions can achieve comprehensive regression testing without overburdening a single resource. This collaborative approach will balance workloads, streamline processes, and enhance test coverage, minimizing delays and bottlenecks. Ultimately, it will enable both divisions to efficiently meet their testing objectives. 2. A balanced approach that combines manual and automated regression testing to ensure broad test coverage and flexibility. 3. Having board(s) in Azure DevOps or a document on SharePoint that provides information about the status of regression testing automation, to facilitate visibility and transparency to BHA project personnel and stakeholders. 4. IV&V recommends reevaluating the schedule priorities by distributing the work according to the resource bandwidth. This will ensure that the schedule is not impacted and that the work is done efficiently between regression testing and Golden Record (GR). 5. Pursue and complete additional formal training in Azure DevOps and Tricentis for test automation as soon and complete efforts to automate the two primary regression test scripts. 6. IV&V recommends DDD and CAMHD to develop a common and consistent approach across divisions for performing regression testing. 7. Determine if current regression testing timeframes are adequate and if not, add more time to the pre-production regression test efforts for all	12/31/24 - R4.9 regression testing was conducted manually from 11/25/2024 to 12/4/2024, identifying one (1) defect. However, users encountered three (3) production defects in R4.9. IV&V remains concerned about the exclusive reliance on manual regression testing, which poses risks such as inefficiencies, human error, limited test coverage, and dependency on specific testers. IV&V recommends investing in automated regression testing to enhance efficiency, reduce the burden on BHA staff, and improve product quality. For R4.10, regression testing is planned for 1/29/2025-2/5/2025, with CAMHD utilizing TOSCA for automated regression testing and DDD relying solely on manual testing. 11/30/2024 - For the 3rd consecutive release (releases 4.7 through 4.9), regression testing is being done solely manually. Relying solely on manual regression testing without any automation could introduce risks and inefficiencies such as increased time and effort that may lead to delays, human error, inconsistencies as testing outcomes can vary depending on the individual tester, limited test coverage, risk of production defects since manual testing is prone to human error and the likelihood of defects slipping through to production increases, and the dependence on specific testers' expertise and knowledge. IV&V recommends continuing investing in automated regression testing as it can improve efficiency and reduce the burden on BHA staff and ensure better product quality over time. 10/31/24 - Automated regression test script (Tosca) issues have yet to be resolved, therefore, regression testing continues to be performed manually. The most recent	Test Practice Validation	Issue	Medium	Open		12/31/2019	Gautam Gulvady
14	Code quality	Due to multiple quality concerns, the project may continue to face impactful system defects.	System defects identified in August that affected claims were due to multi-faceted quality issues were individually addressed during this reporting period. IV&V notes that there is one remaining defect still being evaluated that affects a limited number of claims. Overall, the Project Team has responded with a commitment to increase project quality and is in the process of identifying improvements to associated testing processes. These currently include: Performing Revenue Neutrality Testing to ensure expected revenue streams are largely unchanged from one period to the next. Conducting System Integration Testing, User Acceptance Testing, Performance Testing, and Regression Testing for Release 3.10. IV&V will continue to monitor the testing efforts throughout the balance of Release 3.10 and validate that enhanced quality processes, including industry standard regression testing, continue for Agile Release 3.11 forward. Finally, IV&V reviewed and provided feedback on the Help Desk and Semantic Layer design documents per request and found that both documents lacked design details. The identified quality issues have negatively affected DOH billing processes and DOH has stated these are the most impactful defects discovered to date.	The project utilize tools such as SonarQube for continuous inspection of code quality and establishing a source code quality threshold to maintain high-quality, secure, and maintainable code. The project increases comprehensive testing prior to joint testing to reduce the burden on BHA testers and reduce post-production defects. The SI vendor add a "Found In" column to the daily scrum file to indicate the environment where each defect was identified. The SI vendor provides the total number of defects in production and reports these numbers regularly to BHA. Evaluate existing project staff skills and experience level to ensure they meet BHA support requirements. Perform CAMHD revenue neutrality fiscal balance testing on a quarterly basis to ensure revenues are as expected. Assign dedicated resources to provide oversight of CAMHD Fiscal Processes. Monitor implemented improvements for effectiveness. IV&V recommends performing an RCA in collaboration with RSM after all future release deployments for continual quality improvement. BHA and RSM to collaborate on the necessary revisions to the submitted design deliverables to increase level of detail and quality. Perform typical project testing including System Integration, User Acceptance, Performance, and Regression Testing. Dedicate sufficient time in between releases for BHA and RSM to	12/31/24 - R4.9 was deployed to production on 12/5/2024, with successful smoke testing completed on 12/6/2024. A mid-sprint deployment with two (2) user stories followed on 12/16/2024. Currently, 19 production defects remain unresolved (18 medium severity, 1 high severity) despite thorough testing. The SI stated that BHA prioritizes higher-priority tasks, leaving lower-priority defects unaddressed. The SI is working to resolve these issues, IV&V and BHA remain concerned about ongoing code quality problems and their impact on users. BHA is considering utilizing tools such as SonarQube for continuous inspection and improvement of code quality. 11/30/2024 - R4.9 is scheduled to be deployed to production on 12/5/2024. In the current production system, there exists 19 outstanding production defects (17 are classified as medium severity and 2 as high severity). These production defects arose despite testing at all levels. The SI has indicated that BHA prioritizes its work, which results in lower-priority defects remaining unresolved in favor of higher-priority tasks. The SI is making a concerted effort to report and fix these production defects as IV&V and BHA remain concerned that code quality issues continue to impact the project, and users continue to be impacted by post-production bugs. 10/31/24 - The deployment of R4.8 to production occurred on October 16, 2024, which was later than the originally planned date of October 3, 2024. This timeline shift was influenced by a Microsoft fix connected to a previous Behavioral Health Services Administration (BHA) ticket. This fix introduced critical issues in the Provider Portal during System Integration Testing (SIT), which led to a pause in	Project Management	Issue	Medium	Open		9/30/2020	Gautam Gulvady

ID	Short Description	Finding Statement	Analysis and Significance	Recommendation	Finding Update	Category	Type	Priority	Status	Closed Date	Identified Date	Owner
31	Sprint Demos	Lack of regular Sprint Reviews and Sprint Demos will likely lead to misalignments between delivered work and stakeholder needs.	Earlier in the project, end-of-sprint demos were conducted. Sprint reviews/demos help to bring alignment across the team and stakeholders. They are essential building blocks for better software and teams. Sprint demos /reviews showcase the main functionality to stakeholders and incorporate their feedback. Currently, the project has joint testing involving the SI and BHA personnel. Per Agile Best practices, IV&V believes having Sprint demos/reviews during a sprint helps clarify and validate design prior to testing, steer the team in the right direction, and help to avoid big mistakes. This would also allow the testing team to focus solely on testing, which is beneficial. Based on Agile Best Practices, Sprint Demos or reviews occur during a sprint with the development team, scrum master, and product owner and and gives all relevant stakeholders the opportunity to assess the completion of user stories, review important metrics and outcomes, and confirm if the Sprint goal has been achieved. This approach would also help prioritize and prepare the backlog for the next Sprint. Regular Sprint Reviews and demos strengthen the collaboration between development teams and stakeholders by enhancing communication channels and validating project objectives and ensuring that sprint deliverables remain consistent with stakeholder requirements. They are a great opportunity for the product owner, stakeholders, and the team to review what's being delivered and receive feedback. This way, the team can gauge responses and make observations earlier during development and not later during testing. Celebrating the team's accomplishments is also an essential	According to Agile Best Practices, IV&V recommends including Sprint reviews and demos in future releases (R4.2 and onwards). 1. At the end of each sprint, conduct a sprint review meeting to demonstrate the completed work to stakeholders and gather feedback. Use this feedback to refine and reprioritize the product backlog. For a 2-month sprint, IV&V recommends having more than one (1) demo during the sprint. 2. Create a stakeholder register to identify all stakeholders. List their identification, assessment, and classification. Review the register regularly to plan appropriate stakeholder engagement. 3.Foster active participation from users and stakeholders during both Sprint Reviews and Sprint Demos. Emphasize the value of iterative feedback to guide development and ensure that user needs are consistently met. 4. Establish standardized communication protocols for both Sprint Reviews and Sprint Demos. Encourage teams to deliver concise and informative progress reports, including achievements, challenges, and plans. This will enhance stakeholder engagement and project transparency. 5. Institute a structured documentation process for both activities. Document key decisions, action items, and insights from each session to ensure accountability and to support ongoing process improvement.	12/31/24 - IV&V was informed that sprint reviews and demos are currently conducted on an ad hoc basis. To improve the process, the project is planning to incorporate the demonstration of Calculator functionality into sprint reviews and demos. This would provide valuable visibility into the progress and help address ongoing issues with the calculator and provider portal, which are identified as frequent problem areas. 11/30/24 - The project has indicated that sprint reviews and demos are conducted on an ad hoc basis, depending on the completion of features. There are no regular meetings scheduled for sprint reviews. Demos are typically performed informally, often through quick conversations or screen sharing, based on the priority and readiness of the features. This informal approach to demos may result in inconsistent feedback collection and delayed issue identification, which can negatively impact the overall effectiveness of the sprint. IV&V recommends that the SI vendor establish regular sprint reviews and demos to ensure structured feedback, provide more visibility into all completed features, and improve team coordination. 10/31/24 - The project has not yet established regular sprint demos and Sprint Reviews. While testing activities provide DOH with a preview of implemented functionality, IVV remains concerned that the absence of formal demos and Sprint Reviews may lead to misalignment between requirements and system design. IV&V continues to recommend setting up a consistent cadence for Sprint Reviews and demos to validate whether stakeholder requirements have been effectively met, to gather Subject Matter Experts' (SMEs) feedback that can also be used to	Sprint Planning	Risk	Medium	Open		7/26/2023	Gautam Gulvady
33	System performance	Performance bottlenecks with the INSPIRE production environment may result in low productivity and poor user experience.	Performance issues have been identified that have the potential to impact the system's functionality, user experience, and the overall reliability of the system. These performance issues warrant immediate attention and resolution. The last performance test was executed in June 2023 for Phase 3 releases (R3.x). ~800+ new User Story Points (USPs) have been developed since the last performance test execution. Developmental Disability Division (DDD) personnel are encountering performance issues with re-assigning cases and opening the DDD – Contact Notes (Fiscal View – Complete) view. CAMHD has not reported performance issues.	IV&V recommends: BHA execute a performance test during the development of R4.6 (planned completion 5/20/2024), identifying test cases and scenarios that include both DDD and CAMHD functionality, transactions/functionality that are performance intensive, e.g., calculator functionality 2. Conduct load and performance testing for each release that has significant new features/functionality, e.g., calculator-related transactions. 3. Create a plan for comprehensive performance testing and address any performance bottlenecks. 4. Have the benchmark assessments done annually and implementation of Azure App Insights for Power Platform. 5. Execute test scripts that measure the run-time for execution of long-running transactions. E.g., calculator functionality/transactions and monitoring results over time.	12/31/24 - Microsoft conducted performance testing for CAMHD functionality (MAX and Provider Portal) with 100, 200, and 300 users and delivered the performance report. According to the report, response times for MAX and INSPIRE remained consistent during each test. However, volumes at 300 portal users exceeded 2x the current production load, which Microsoft attributed to the portal running in trial mode. This caused degraded response times once user volume surpassed 200. Microsoft plans to conduct another round of testing after the R4.9 deployment once the portal environment is switched to production mode. Additionally, Microsoft is performing performance testing for DDD functionality and expects to deliver the results in January 2025. IV&V recommends that the project continues to prioritize completion of the testing and providing the results. 11/30/2024 -Due to BHA and Microsoft (MS) resourcing challenges, despite completing the CAMHD performance test earlier, the project decided to execute the test from the beginning for both DDD and CAMHD. MS has completed performance testing the CAMHD functionality and will conduct performance testing for the DDD-scoped items after the deployment of R4.9 to production. The estimated timeline for completion is 1–2 weeks. 10/31/24 - Microsoft is continuing performance testing of the application and will provide the results/report upon completion. After discussions with a project stakeholder, it is agreed that when Microsoft provides the report, this report will be provided to the project team and IV&V. 9/30/24 - Performance testing was originally conducted	Project Management	Issue	Medium	Open		8/18/2023	Gautam Gulvady

ID	Short Description	Finding Statement	Analysis and Significance	Recommendation	Finding Update	Category	Type	Priority	Status	Closed Date	Identified Date	Owner
34	Limited BHA resources	Shortage of Behavioral Health Administration (BHA) project resources could lead to reduced productivity and project delays.	Key BHA project resources have reported constraints on how much time they can devote to the project. The departure of the Child and Adolescent Mental Health Division (CAMHD) System Management Office Manager and CAMHD Inspire Project Lead could further impact the project if DOH cannot acquire suitable resources. The lack of capacity of the DOH test script developer has slowed DOH's automated test script development. If BHA is unable to fully staff the project and their existing resources continue to be constrained, the project could experience a reduction in productivity and project delays.	1. Utilizing peer-to-peer knowledge sharing, allowing experienced team members to informally share their expertise during team meetings. Additionally, creating internal documentation that outlines best practices and processes for developing security policies would serve as a self-service resource for the team. 2. DDD and CAMHD have further discussions to optimize resource utilization between the two divisions. 3. BHA should explore options for offloading project team members' daily responsibilities to other staff. 4. BHA should work quickly to create new positions and receive State approval. 5. BHA should identify tasks and duties that they can ask the SI to assume, as permitted by the contract, which are presently being handled by BHA members. 6. BHA should explore the use of contractors to fulfill the functions for open project positions.	12/31/24 - IV&V is concerned that limited resources at BHA could cause project delays and affect system quality. For instance, IT staff and other departments have struggled to find time to update and create security policies, as these tasks have not been prioritized alongside their regular duties. BHA submitted requests for new positions, which the State did not approve. The hope is that filling a key position will help address this issue, allowing the new hire to take on policy drafting or free up others to focus on these critical tasks. While there are resources for specific tasks, only a few people have the necessary skills. Expanding this knowledge and responsibility across the team is a key part of their plan. 11/30/24 - IV&V remains concerned that limited BHA resources could create project delays and reduce system quality. BHA requested funding for additional project resources, however the request was not approved by the State. BHA plans to resubmit the request in next year's budget and will continue to look for other resource and funding options. IV&V continues to recommend that the project streamline communications between BHA divisions in order to increase the productivity of project activities and decision-making. 10/31/24 - IV&V remains concerned that inadequate DOH resources may result in project delays and diminished system quality. IV&V is continuing to recommend that the two divisions communicate directly to address their resourcing needs and optimize resourcing. DDD plans to engage new hires in additional project areas, including testing. IV&V will continue to explore roles and tasks with BHA and make recommendations for staffing coverage.	Resource Management	Issue	Medium	Open		8/18/2023	Michael Fors
39	Deployment process.	Due to on-going deployment processes and technical execution issues, the Project may continue to encounter defects and challenges, e.g., when releases are in production or in meeting projected timelines for production and non-production deployments.	Several post-production bugs have been encountered in the Phase 4 release, R4.4. Regarding the bug, "Human Services Research Institute (HSRI) flow is failing in production" (bug# 34886 https://dev.azure.com/DOHBHA/DOH%20BHA%20INSPIRE/_workitems/edit/34886) what is in development and deployed is vastly different from what was deployed to production. The root cause for these errors is currently being investigated. Repeatable documented release and deployment and resources experienced with deployments will help ensure that mistakes are minimized and that functionality is not mistakenly deprecated when deployments take place.	1. The Project should consider automating deployments for resource savings, increased efficiency, consistency, faster time to market, improved collaboration and reliability, scalability, version control integration, and rollback capability. 2. Ensure there are adequate and qualified resources to support the current deployment processes. This may require the support from RSM resources to provide assistance and knowledge transfer for some of the more complex deployment components. 3. As appropriate, consult with RSM on best practices that BHA could employ to support deployment. 4. Request the assistance of the RSM Solution Architect in reviewing and correcting issues associated with the consistency of configurations across environments, ensuring that the test environment is capable of testing ALL functions of any given release without the need for using multiple test environments. 5. Request the assistance of the RSM Solution Architect in review of deployment scripts as a double check for accuracy and completeness prior to commencing deployment activities. 6. The Project Team should consider evaluating potential changes to improve/enhance existing processes and communications to address current release/deployment shortfalls. 7. IV&V recommends performing an RCA in collaboration with RSM for the continued concerns surrounding environment differences. 8. IV&V recommends updating the Project's Configuration Management Plan to address the current needs of the Project. This should include specific checklists geared at ensuring repeatable promotional processes by	12/31/24 - The Root Cause Analysis (RCA) for the medium-severity defect (addressed with a hotfix deployed on 10/24/2024) identified it as deployment-related (related to missing/removed workflows). R4.9 was deployed to production on 12/5/2024, followed by a mid-sprint deployment (MSD) with two user stories on 12/16/2024. IV&V will monitor the quality of both the R4.9 deployment and the MSD. 11/30/2024 - The Root Cause Analysis (RCA) for the medium severity defect (for which a hot fix was deployed on 10/24/24) is still pending. There were no deployments in November 2024; R4.9 is scheduled to be deployed in December 2024. IV&V will monitor the quality of the upcoming R4.9 deployment and MSDs. 10/31/24 - R4.8 was deployed to production on 10/16/24, instead of 10/3/24. This delay was caused by a Microsoft (MS) fix related to a previously raised Behavioral Health Services Administration (BHA) ticket, which introduced critical issues in the Provider Portal in the System Integration Testing (SIT) and Test 2 environments, halting testing. The SI vendor's initiative to involve the team in a root cause analysis of the Microsoft fix shows a commitment to problem-solving. This collaboration aims to improve understanding, alignment, and resolution strategies, contributing to the project's success. The SI vendor deployed a hot fix for medium severity defect on 10/24/24; the Root Cause Analysis (RCA) for this defect is still pending. The project plans to deploy Fast Healthcare Interoperability Resources (FHIR) as a mid-sprint deployment (MSD). IV&V is concerned about inconsistencies in the deployment processes, particularly	Release/Deployment Planning	Issue	Low	Open		1/25/2024	Gautam Gulvady

ID	Short Description	Finding Statement	Analysis and Significance	Recommendation	Finding Update	Category	Type	Priority	Status	Closed Date	Identified Date	Owner
40	Insufficient testing	Insufficient testing processes can lead to poor-quality software, project delays and extended user acceptance testing.	There is a limited understanding of the testing processes and the roles and responsibilities of those involved in the process. There is no formal process for the development, review, and approval of test scenarios, test cases, and test results to ensure adequate participation and approval from state staff. When testing user stories 34564 and 34756 on 1/31/24, the test tasks did not reflect the real use cases to give stakeholders adequate confidence that the user story could be tested. As a result, time was expended by testing resources, testing was inadequate, and a user story may have been deemed to meet functionality when it did not.	IV&V has requested an overview of the testing process, with a focus on process such as tracking test coverage and requirements traceability.

A Stakeholder Register helps identify and understand all project stakeholders, ensuring their needs are met and risks are managed through effective communication. A RACI clarifies roles and responsibilities, improving collaboration, decision-making, and resource management, which are all critical for the success of IT projects.

1. Identify stakeholders (output is stakeholder register) and develop a RACI matrix for testing.

2. Review the overall testing process and implement any needed improvements identified. | 12/31/24 - : IV&V provided a list of testing topics for the SI to address during the current DD&I phase of the project. However, the SI's response focused on the M&O phase rather than DD&I and did not reference updated documentation. BHA has communicated to the SI that the project have always been in DD&I and the project can only transition to the Maintenance and Operations (M&O) phase after CMS has certified INSPIRE/MAX. In addition to updated documentation, IV&V continues to request a walkthrough meeting to further understand the testing process. IV&V will continue discussions with BHA to ensure progress is made in advancing the SI's testing efforts.

11/30/2024 - IV&V has identified specific testing areas to discuss with the appropriate project representatives to gain a deeper understanding of the INSPIRE testing process. DDD has agreed to facilitate the organization of these meetings.

10/31/24 - IV&V has requested a session to review test processes and will provide a list of suggested items to cover (for example, tracking test coverage and requirements traceability). The goal of this session is to identify opportunities to improve the testing process, as well as the reporting of test results and coverage.

9/30/24 - BHA and IV&V reviewed the RACI matrix, with IV&V providing feedback. BHA continues to refine and develop the RACI matrix to define the roles clearly and involve the right stakeholders for successful project outcomes. The SI vendor currently tracks test coverage manually using Excel worksheets, missing out on the capabilities of Azure DevOps for tracking test coverage and | Test Practice Validation | Issue | Medium | Open | | 1/31/2024 | Gautam Gulvady |
| 41 | Backlog meetings | The absence of separate dedicated product backlog review meetings can lead to unclear priorities, misalignment with stakeholders, inadequate refinement, and increased risk of scope creep. | Currently, product backlog reviews are done during design meetings and/or weekly issues meetings. This can lead to, e.g., scattered focus, limited stakeholder engagement, difficulty in managing complexity, and delayed decision making.
A product backlog review is an essential part of agile project management, particularly in Scrum. It's a collaborative meeting where the Scrum team, including the Product Owner, Scrum Master, and development team members, inspect and adapt the product backlog.

The product backlog review is an important Scrum ceremony that helps keep the backlog relevant, up-to-date, and aligned with the project's goals and priorities. Here's a summary of what typically happens during a product backlog review:

1. Inspecting Backlog Items: The team reviews the items on the product backlog. This involves discussing each item, understanding its priority, value, and acceptance criteria.
2. Ensuring Clarity: The team ensures that each backlog item is clear and well-understood. Any ambiguities or uncertainties are clarified at this stage.
3. Estimation: Estimation of backlog items may occur during the review. The team may use techniques like story points or relative sizing to estimate the effort required for each item.
4. Re-prioritization: Based on new insights, changes in requirements, or stakeholder feedback, the team may need to re-prioritize items in the backlog.
5. Removing or Adding Items: Items that are no longer relevant or necessary may be removed from the backlog. New items that emerge or are identified as important may be added.
6. Refinement: Backlog refinement may also occur during the review. This involves breaking down large items into smaller, more manageable ones, or adding more detail to items as | Separate dedicated product backlog review meetings (during sprints) would allow clarifying any ambiguities or uncertainties, re-prioritization, estimation, and refinement of backlog items. This would allow the project team to avoid situations where decisions about including items mid-sprint would have to be taken.

IVV recommends scheduling separate dedicated product backlog review meetings (during sprints) where all relevant stakeholders are invited to review the product backlog and scheduled at the appropriate time(s) such that there is sufficient time to plan the design, development, and implementation (DDI) of the next release(s). | 12/31/24 -IV&V observed two CAMHD backlog prioritization meetings and will continue to monitor the process regularly. While CAMHD and DDD are generally satisfied with the backlog prioritization, there are areas for improvement, particularly in balancing input from a broader user base and ensuring that federal compliance and performance-related features are given appropriate attention in the backlog. By refining these aspects, both teams can improve the backlog prioritization process.

11/30/24 - The DDD team has scheduled a meeting for this month (November) to review the product backlog. During this session, the team will assess the current backlog items, prioritize them according to business value and urgency, and ensure they align with the overall project goals. BHA plans to invite the IV&V team to participate in the backlog review meetings.

10/31/24 - It has been confirmed that CAMHD holds bi-weekly product backlog review meetings to review and adapt the product backlog. DDD communicated that they conduct collaborative reviews as needed and is yet to adopt regular dedicated product backlog review meetings. IV&V recommends that DDD establish regular product backlog review sessions to ensure consistent alignment with project goals and prioritize tasks effectively.

9/30/24 - IV&V continues to recommend the development and use of a RACI matrix to identify stakeholders who need to be involved in Sprint Reviews and product backlog reviews. BHA and IV&V reviewed the RACI matrix, with IV&V providing feedback. BHA continues to refine and develop the RACI matrix to clearly define the roles and | Sprint Planning | Risk | Medium | Open | | 1/26/2024 | Gautam Gulvady |

ID	Short Description	Finding Statement	Analysis and Significance	Recommendation	Finding Update	Category	Type	Priority	Status	Closed Date	Identified Date	Owner
42	Governance	Lack of effective governance and communication among stakeholders can have significant negative impacts on a project in several ways.	Ineffective governance and communication among stakeholders can significantly impact a project in several ways, e.g., stakeholder disengagement, misunderstandings, conflict and tension, misalignment of objectives, increased risks, unclear roles and responsibilities, and quality issues. An example on this project is the development and implementation of Golden Record/Master Data Management (MDM). The lack of effective governance and communication among stakeholders can result in project delays, budget overruns, and decreased quality. It's essential for project managers and stakeholders to prioritize clear communication and establish robust governance structures to ensure project success.	IVV recommends considering the following recommendations to establish effective governance and communication among stakeholders: 1. Create a Governance Structure: Implement a governance structure that defines decision-making processes, escalation procedures, and accountability mechanisms. Clarify how decisions will be made, who has authority, and how issues will be resolved. 2. Develop a Stakeholder Registry, RACI chart, and Stakeholder Engagement Plan: Identify key stakeholders and develop a plan to engage them throughout the project lifecycle. Tailor communication strategies to address the needs and preferences of different stakeholders, ensuring their active involvement and support. 3. Clearly define Roles and Responsibilities: clearly outlining the roles and responsibilities of each stakeholder involved in the project, would ensure that everyone understands their duties and how they contribute to the project's success. 4. Encourage Open Communication and Feedback: Foster a culture of open communication and feedback where stakeholders feel comfortable sharing their thoughts, concerns, and suggestions. Encourage constructive dialogue and actively seek input to improve decision-making and problem-solving. Keep stakeholders informed about project progress, milestones, and key developments through regular updates and progress reports. Highlight achievements, challenges, and any changes to the project plan or scope. 5. Resolve Conflicts Promptly: Address conflicts and disagreements among stakeholders promptly and professionally. Encourage dialogue, active listening, and compromise to find mutually acceptable solutions that support project goals. 6. Manage Expectations: Manage stakeholders' expectations by setting	12/31/24 - Recent discussions between BHA and the SI during this reporting period indicate that BHA is utilizing additional User Story Points (USPs) to investigate and resolve defects from recent releases, such as R4.8. Based on earlier discussions with BHA, IV&V understands that a warranty period applies to such defects, meaning the vendor should not charge BHA additional costs for their resolution. However, the SI has stated that there is no warranty period. IV&V and BHA will review the contractual terms and continue discussions in January 2025. The ultimate goal of this discussion is that all stakeholders have a common understanding of the current contractual terms & conditions governing defect fixing and how defect fixing will be addressed in the future. 11/30/24 - IV&V is unaware of the progress towards mitigating this risk. 10/31/24 - The lack of productive communication between DDD and CAMHD could lead to misunderstandings, confusion, unclear project priorities, and ultimately project delays. BHA is considering developing a documented governance process for restarting production systems. The project is considering various options for tracking cost of features that require a significant level of effort (project refers to these as "Big Rock" features). 9/30/24 - There remain some communication challenges between stakeholders on project aspects such as defect tracking and reporting, and tracking and monitoring costs related to Big Rock functionalities. IV&V recommends project teams maintain collaboration and information	Project Management	Issue	Medium	Open		2/29/2024	Gautam Gulvady
43	SharePoint folder performance.	Execution time for the process for updating DDD SharePoint folders was unacceptable.	The existing DDD SharePoint documents and folders update process is intensive and the execution time was unacceptable - this process took 11 calendar days to execute in production with R4.4. This process is part of several intense processes that update SharePoint documents and folders. The SI vendor recommended against doing this intensive process. However, no feasible alternative solutions were provided and this process was implemented. BHA has the flexibility to refine and alter their SharePoint directory structure. As a result, per the SI vendor, the process does not pick up continuously evolving permutations of folder structures in Production, nor can the execution time be estimated or benchmarked. Per discussions between the SI vendor and BHA over many months, this process was not going to complete 100% of the operations because of the different folder structures in Production. And this process/jobs has been updated many times to address different folder structures that were captured during testing, but there is no guarantee that it covers every possible scenario - some operations failed because the folder structure was not encountered during testing, which was an expected event. The folders in Production that were not picked up with Flow were supposed to be manually updated. The current solution utilizing Power Automate provided the necessary steps to automate this process, but it was never going to capture 100% of folders. And the process took 11 calendar days to execute in production.	IV&V recommends doing an impact analysis, e.g., downstream impact. IV&V recommends DDD puts on hold any development utilizing Power Automate for the performance issue encountered in production (marked "TBD" in finding #14 related to "SharePoint Bulk Flows still running"), related user stores, e.g., "Changes to DDD folders", and defects. IV&V recommends evaluating other feasible options, e.g., leveraging SharePoint tools and best practices. A project issue should be opened to identify and manage the resolution of this issue.	12/31/24 - DDD is working with stakeholders to determine the direction and next steps on the digitization initiative. 11/30/2024 – BHA plans to launch an initiative to digitize approximately 2.5 million paper documents as part of a broader effort to transition to a paperless system. While the SI has been working on enhancing the existing process which previously required around 15 days to complete, the current SharePoint site cannot accommodate the anticipated volume without a redesign of the SharePoint hierarchy. Considering the low frequency of the process (only once or twice per year) and the challenges posed by the SharePoint limitations, DDD has decided to pause further development on these improvements. However, if DDD encounters difficulties in executing the existing process, it will reevaluate the need for these enhancements. 10/31/24 - Development of the design improvements to create and rename folders for all existing customers in their SharePoint subsite will begin as higher priority user stories have been completed and a SharePoint resource becomes available. The new design will utilize PowerShell scripts, which are expected to be more efficient than the previously used Power Automate solution, which had slower-than-anticipated processing times. 9/30/24 - The development of the improvements will commence once a SharePoint resource is available. 8/31/2024 - The SI vendor has completed the design and stated that development of the improvements will commence once a SharePoint resource is available.	Release/Deployment Planning	Issue	Medium	Open		4/30/2024	Gautam Gulvady

ID	Short Description	Finding Statement	Analysis and Significance	Recommendation	Finding Update	Category	Type	Priority	Status	Closed Date	Identified Date	Owner
45	Cost tracking for big rocks	The current process does not allow BHA to track actual costs versus budgeted costs by feature/functionality.

The current invoices from the System Integrator (SI) vendor lack sufficient details that would allow BHA to track actual costs versus budgeted costs by, e.g., features such as Provider Portal, Maui Wildfire Communication, FHIR and Golden Record or by user story. | The current process does not allow BHA to track actual costs versus budgeted costs of large functionality such as Provider Portal, Maui Wildfire Communication, Fast Health Interoperability Resources (FHIR) or the Golden Record (GR). The absence of a clear process doesn't give insight into, e.g., how much of the budget has gone into developing functionality such as Provider Portal, Maui Wildfire Communication, FHIR or GR functionality.

By incorporating a clear process that would allow BHA to monitor costs of large functionality, BHA can maintain better financial records and it would allow BHA to track actual versus budgeted costs and answer questions, e.g., "how much money has been spent on developing Provider Portal, Maui Wildfire Communication, FHIR or Golden Record (GR) functionality?" | | 12/31/24 -BHA has escalated Med-QUEST's ongoing challenges with tracking federal financial participation allotments and managing its claims submission process to the appropriate personnel. The deployment of Fast Healthcare Interoperability Resources (FHIR) has been postponed, with a new target date of January 2025. IV&V remains concerned that scope creep in FHIR development could delay the implementation of other system features, potentially impacting system performance, reducing user productivity, and increasing user frustration. PCG, BHA, and Med-QUEST are having ongoing discussions to resolve Med-QUEST's challenges with tracking federal financial participation allotments and managing its claims submission process.

11/30/2024 - During earlier discussions between BHA and IV&V, DDD emphasized the importance of tracking costs for major functionalities like the Provider Portal and FHIR. In September 2024, IV&V proposed options for cost tracking, including the use of Tags in Azure DevOps (ADO). BHA stakeholders suggested similar straightforward methods, aligning with IV&V's recommendation. Since BHA is currently satisfied with the system integrator's (SI) adherence to the allocated budget for key functionalities, BHA does not consider this as a risk. However, BHA has raised significant concerns about Med-QUEST's ongoing inability to track federal financial participation allotments and its claims submission process, issues that have persisted since the project's inception. These deficiencies require considerable time to make corrections and may require additional funding. Despite previous assurances of procedural improvements, the problem remains unresolved. | Project Management | Preliminary Concern | | Open | | 5/25/2024 | Gautam Gulvady |
| 46 | Defect management. | Neglecting the established defect management process could lead to lost/forgotten defects, user frustration, and could slow resolution of similar defects in the future. | | IV&V recommends to:
1. Based on Best Practices, updating the defect management documentation and having regular refresher training on the defect management process.
2. Send communications to the project stakeholders to clarify the defect management process and the importance of logging all defects.
3. Take steps to assure current and new users understand how to report and/or log defects.
4. Consider designating a defect management lead or champion to oversee adherence to the process and assure all defects are logged.
5. Keep stakeholders informed about defect status, priority, impacts, and resolution timelines. This could increase awareness of the importance of logging defects.
6. Discuss ways to improve the defect logging and management process with the SI and come up with a plan to improve. | 12/31/24 - During this reporting period, users encountered production issues related to the Calculator, including an inability to view active cases and resolved cases. However, the corresponding tickets were not promptly created in Azure DevOps (ADO). IV&V remains concerned about the project's non-adherence to the Defect Management process. IV&V and BHA will continue discussions to identify process gaps and determine next steps.

11/30/2024 - In recent meetings with DDD and CAMHD, IV&V discussed the issue of some defects reported to the Helpdesk via phone or other channels not being logged or addressed. DDD noted that staff find the process of logging such defects cumbersome. However, DDD leadership has emphasized that all defects must be logged. IV&V and BHA to continue these discussions to determine process gaps and the next steps.

10/31/24 - DOH leadership continues to express concerns that not all defects are being logged. | Project Management | Issue | Medium | Open | | 9/30/2024 | Gautam Gulvady |
| 47 | Production restarts. | The lack of a governance process for restarting production systems can impact service availability and frustrate end-users and hinder accountability. | | IV&V recommends BHA
1. Develop standard procedures for system restarts, including pre-checks, step-by-step instructions, and post- restart verifications.
2. Require formal approvals before initiating a restart, especially for INSPIRE, and document all actions in a centralized system.
3. Define clear escalation paths for when restarts do not go as planned, including identifying contacts for technical support and management approval for additional interventions.
4. Automate Restart Procedures where possible.
5. The governance process is established, it should be effectively communicated to the project team.
6. Provide stakeholders with a clear explanation of the reason for the restart and the lessons learned, while documenting the restart details in the defect record. | 12/31/24 - BHA suggested that the deployment team or the Help Desk team may be best suited to document the process. IV&V remains concerned that no further progress has been made and will continue to make recommendations on how BHA could resolve this issue and be prepared for a production restart.

11/30/24 - No progress has been made for this reporting period.

10/31/24 - BHA is considering developing a documented governance process for restarting production systems. | Project Management | Issue | Medium | Open | | 9/30/2024 | Gautam Gulvady |
| 48 | Data from external partners | Some AER project requirements are reliant on data provided by external partners (e.g., Dept. of Human Services (DHS)). | Delays in the delivery of this data could lead to project delays and potentially increased costs. | | 12/31/24 - Med-QUEST has resolved the issue with mismatched file templates and fields and has communicated that no further changes will occur. The SI has validated that there are no discrepancies based on the | Project Management | Preliminary Concern | | Open | 1/9/2025 | 9/30/2024 | Gautam Gulvady |

ID	Short Description	Finding Statement	Analysis and Significance	Recommendation	Finding Update	Category	Type	Priority	Status	Closed Date	Identified Date	Owner
49	Unreported AERs and false positives.	Multiple AERs for a single episode and unresolved false positives could hinder CaseManager's ability to resolve unreported AERs.	SI has yet to demonstrate that multiple AERs are not created for a single episode and that an AER record should match an unreported AER record. These concerns arise from the use of claims data to identify unreported AERs and to address false positives - events initially flagged as adverse but later determined not to be. If left unresolved, these issues could hinder the Case Managers' ability to effectively resolve unreported false positives.	IV&V recommends that the SI vendor validate the logic to address BHA's concerns.		Project Management	Preliminary Concern		Open		12/17/2024	Gautam Gulvady