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DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES | *KA 'OIHANA LOIHELU A LAWELAWE LAULĀ*

OFFICE OF ENTERPRISE TECHNOLOGY SERVICES | *KE'ENA HO'OLANA 'ENEHANA*

P.O. BOX 119, HONOLULU, HAWAII 96810-0119

May 8, 2025

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

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

Attachments (2)

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

IV&V Report for the period of

March 1 – March 31, 2025

Final Submitted: April 14, 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
- E – List of Production Defects

Executive Summary

The project continues to show steady progress in the buildout and deployment of key system features. The INSPIRE and AER projects are progressing well, with the system currently undergoing manual regression testing and on track for a combined new release slated for April 3, 2025. The new AER solution recently completed Hypercare (an intense monitoring and support phase to identify and resolve defects) and is now live in production. The AER team worked diligently to close all defects reported during Hypercare and is now focused on refining their AI model to better support case manager policies and to ensure proper adverse event notifications are sent.

New defects continue to appear in the production system and the integrated development team is making efforts to remediate them. Following the recent deployment of the new release to the live/production system, new production defects were identified, including 1 high-severity defect. It remains unclear why these defects were not discovered during testing. The SI has reiterated its intention to improve quality assurance by expanding test coverage, enhancing smoke testing, and refining defect re-testing procedures. Additionally, the project will be onboarding a Tosca SME in early April 2025 to help with repairing automated test scripts. This could also offer some relief to BHA resources supporting current manual regression testing efforts.

BHA is making progress in actively documenting and expanding the system support knowledge base to build a comprehensive help desk resource that enables users to find answers independently of help desk or project resources.

IV&V closed a finding about SharePoint folder performance (finding #43). The project has been able to work around SharePoint challenges and limitations thus far and has developed a plan to address them as part of the upcoming digitization initiative.

Executive Summary

Jan	Feb	Mar	Category	IV&V Observations
Y	Y	Y	**Sprint Planning**	The Product Backlog meetings are being scheduled, and the IV&V team has been invited to attend. These meetings help to align priorities, manage technical dependencies, and ensure that backlog items are well-defined for development and testing, helping to maintain project velocity and minimize rework.
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 this reporting period. IV&V will continue to monitor the US development and validation process in upcoming reporting periods.
Y	Y	Y	**Test Practice Validation**	Following the recent deployment of the new release to the live/production system, new defects were identified, including 1 high-severity defect. It remains unclear why these defects were not discovered during testing. The SI has reiterated its intention to improve quality assurance by expanding test coverage, enhancing smoke testing, and refining defect re-testing procedures. Additionally, the project will be onboarding a Tosca SME in early April 2025 to help with repairing automated test scripts. This could also offer some relief to BHA resources supporting automated testing efforts.

Executive Summary

Jan	Feb	Mar	Category	IV&V Observations
Y	Y	Y	**Release / Deployment Planning**	It remains unclear whether RCAs (Root Cause Analyses) are adequately documented for defects deployed into production, and whether the project is effectively utilizing RCAs to minimize post-production defects. BHA has indicated that resource constraints have impeded some RCA efforts. Neglecting to implement RCA processes could result in heightened defect rates, including recurring issues due to unidentified and/or unresolved root causes.

Executive Summary

Jan	Feb	Mar	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 March reporting period with no active findings.
G	G	G	**Targeted KT**	This category remains Green (low criticality) for the March reporting period. IV&V will continue to monitor.
G	G	G	**Project Performance Metrics**	There are no project performance metrics to report for the March 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 March reporting period. There are no outstanding findings in this category, and IV&V will continue to monitor.

Executive Summary

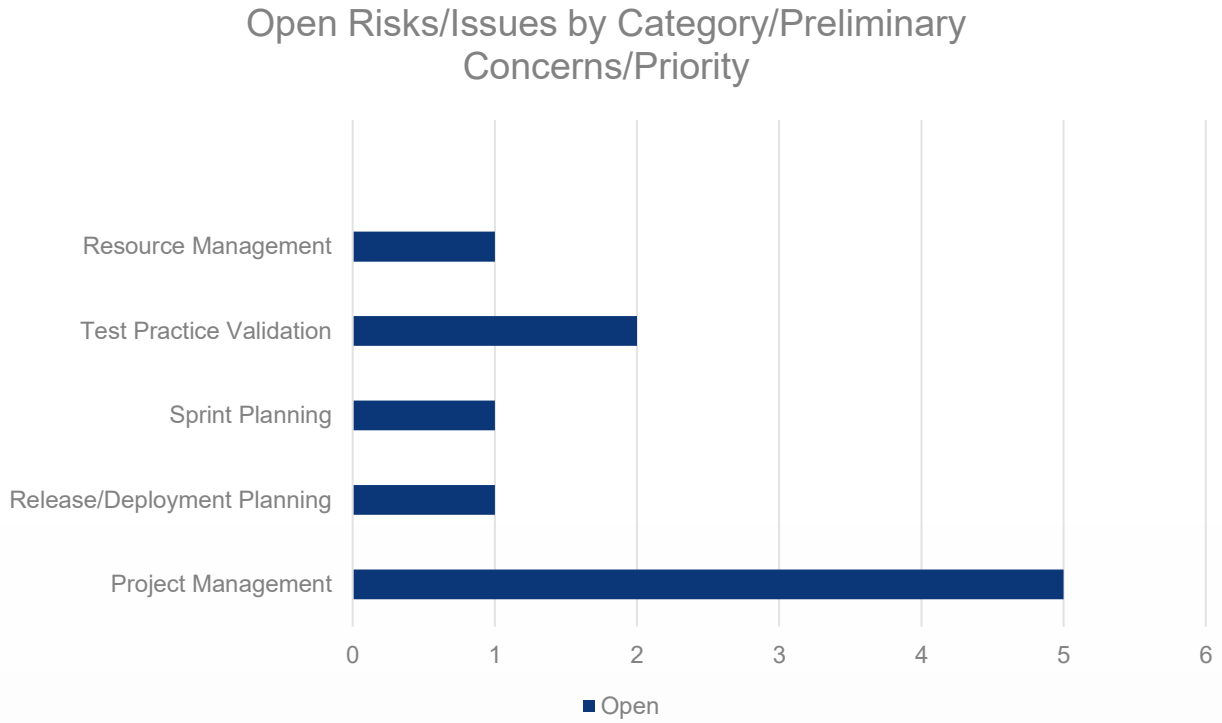
Jan	Feb	Mar	Category	IV&V Observations
Y	Y	Y	**Project Management**	The new AER solution recently completed Hypercare (an intense monitoring and support phase to identify and resolve defects) and is now live in production. The AER team worked diligently to close all defects reported during Hypercare. The project is currently prioritizing the product backlog. To help case managers better understand the system, the project is creating documentation to enhance system use. The AER team is working to adjust their AI model to better support case manager policies and to ensure proper adverse event notifications are sent.

Executive Summary

Jan	Feb	Mar	Category	IV&V Observations
Y	Y	Y	**Resource Management**	BHA is making progress in actively documenting and expanding the system support knowledge base to build a comprehensive help desk resource that enables users to find answers independently. Additionally, the project will be onboarding a Tosca SME in early April 2025 to help with repairing automated test scripts. This could also offer some relief to BHA resources supporting automated testing efforts. Furthermore, documentation, knowledge transfer, and skill-building sessions will be provided to the DDD staff, ensuring they are well-equipped to maintain and update the scripts effectively moving forward.

Executive Summary

As of the March 2025 reporting period, Ten (10) open findings were updated – Nine (9) Medium Issues, One (1) Medium Risk spread across the Release/Deployment Planning, Test Practice Validation, Sprint Planning, Project Management, Resource Management, assessment areas are currently 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 (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 an increased risk of scope creep. **Update**: Product Backlog meetings are being scheduled, and the IV&V team has been invited to attend. These meetings are essential for aligning priorities, managing technical dependencies, and ensuring that backlog items are well-defined for development and testing, helping to maintain project velocity and minimize rework.	M

Recommendations	Status
CAMHD and DDD implement a structured feedback management process with a prioritization framework to ensure that all new requests are thoroughly evaluated and aligned with project goals before being added to the backlog.	Open
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:** The SI has updated the AER regression test scripts. Regression testing for R4.11 began on 3/25/25 and is scheduled for completion by 4/2/25. For this release, CAMHD will perform both manual and automated testing, while DDD will primarily focus on manual regression testing. To ensure continued support for future Phase 4 releases—R4.12 and beyond—the project will be onboarding a Tosca Automated Regression Testing Subject Matter Expert (SME) in early April 2025, with work scheduled to begin subsequently. This effort is expected to take place in April and May 2025. Upon completion, the INSPIRE project will have a fully updated and comprehensive set of automated test scripts. Additionally, documentation, knowledge transfer, and training will be provided to the DDD staff to ensure they can effectively maintain and update the scripts going forward.	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:** The AER solution is in production. The project team closely monitored the solution to ensure stability, quickly resolve issues, and help users adjust to the new system (also known as Hypercare); Hypercare ended on 3/21/25 and the project is prioritizing the product backlog. The AER team worked diligently to close all defects reported during Hypercare. Since the deployment of R4.10 on 2/6/25, the project has identified additional unresolved production defects, including 1 high-severity defect, in Azure DevOps (ADO) (see Appendix E for details), despite testing at the unit, system integration (SIT), regression, joint, and smoke testing levels. In response, the System Integrator (SI) is enhancing smoke test scripts to provide more comprehensive coverage, including functionality such as the Provider Portal. To further strengthen quality assurance, the project will be onboarding Tosca automated regression testing expert in early April 2025, with work scheduled to begin subsequently. The expert will focus on repairing existing Tosca scripts and reinitiating automated testing efforts.	M

Recommendations	Status
Make efforts to implement a streamlined Root Cause Analysis (RCA) process to identify the causes of defects and prevent recurrence. Due to project resource constraints, propose timeboxing RCA efforts for each defect introduced into production. Timeboxing involves allocating a fixed period (e.g., 1-2 hours per defect or a set number of hours per week) for focused Root Cause Analysis (RCA) activities. These activities may include quickly gathering defect context, analyzing potential causes, and proposing corrective actions, all within the specified timeframe. Project PM(s) can oversee the tracking of corrective actions to ensure completion.	Open

IV&V Findings & Recommendations

Test Practice Validation (cont'd)

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 needs are met and risks are managed through effective communication. A RACI matrix 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:** It remains unclear whether RCAs (Root Cause Analyses) are adequately documented for defects deployed into production, and whether the project is effectively utilizing RCAs to minimize post-production defects. BHA has indicated that resource constraints have impeded some RCA efforts. Neglecting to implement RCA processes could result in heightened defect rates, including recurring issues due to unidentified and/or unresolved root causes. With the R4.11 go-live scheduled for 4/3/25, IV&V will continue to monitor the deployment quality of R4.10, FHIR, MSDs, and the AER solution to identify any deployment-related defects.	L

Recommendations	Status
Implement a streamlined Root Cause Analysis (RCA) process to identify deployment causes and prevent recurrence. To manage resource constraints, consider timeboxing RCA efforts—e.g., 1–2 hours per defect or a set number of hours weekly. Within this timeframe, focus on gathering context, analyzing causes, and proposing corrective actions. Project PMs can track these actions to ensure follow-through.	Open
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	**Low Issue:** Execution time for the process for updating DDD SharePoint folders was unacceptable. **Finding Update:** Due to the pending funding approval for the DDD digitization project (currently no target approval date), an update will not be available. Once approved, the digitization project will commence. Hence, IV&V will categorize this finding as closed and monitor it for now under the "Closed but Monitoring" status.	Closed and Monitoring

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:** The AER solution is in production. The project team closely monitored the solution to ensure stability, quickly resolve issues, and help users adjust to the new system (also known as Hypercare); Hypercare ended on 3/21/25 and the project is prioritizing the product backlog. The AER team worked diligently to close all defects reported during Hypercare. The AER solution's progress is being discussed in regular meetings between key stakeholders. Since the deployment of R4.10 on 2/6/25, the project has identified additional unresolved production defects, including 1 high-severity defect, in Azure DevOps (ADO) (see Appendix E for details). BHA is prioritizing higher-priority tasks, which has delayed the resolution of these lower-priority issues, although remediation efforts are underway. The R4.11 go-live is scheduled for 4/3/25. IV&V continues to express concern about code quality and will closely monitor R4.10, FHIR, any MSDs, and the AER solution.	M

Recommendations	Status
The project have discussions around utilizing 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

IV&V Findings & Recommendations

Project Management (cont'd)

Recommendations	Status
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	**Low Issue:** Performance bottlenecks with the INSPIRE production environment may result in low productivity and poor user experience. **Finding Update:** The Production system performance of the AER solution and INSPIRE remain stable with no current issues. IV&V will continue monitoring system performance for an additional month.	L

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. **Update:** There are no updates for this reporting period. IV&V will continue monitoring governance for an additional month.	M

Recommendations	Status
Establish a mutual understanding of the contractual terms and conditions: BHA and the SI have discussions to align on a shared understanding of the contractual terms and conditions for the INSPIRE project.	Closed
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 proactively communicate any changes or deviations from the plan.	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
46	**Medium Issue:** Lack of oversight of the established defect management process could lead to lost/forgotten defects and user frustration and could slow the resolution of similar defects in the future. **Finding Update:** In March 2025, the SI provided documentation that was originally created in 2019, outlining the Help Desk process. IV&V is continuing its review of the process and will provide feedback and recommendations based on best practices in April 2025. Notably, the project has placed increased attention on this area, which is a positive development. As a result of this heightened focus, IV&V has observed a corresponding rise in the number of defects being logged in Azure DevOps (ADO), indicating stronger adherence to reporting protocols and greater transparency in issue tracking. Productive discussions are underway to address critical defects. By reviewing the Help Desk process and addressing any gaps, IV&V anticipates improvements in the overall defect management approach. BHA usually receives issues by email or helpdesk calls, with most reports submitted by email. Depending on the severity of the defect, BHA personnel may consult with other team members and flag high-severity defects, reporting them to the SI. While the current process is generally effective, there is room to speed up how critical defects are handled, particularly by enhancing how these issues are initially logged.	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:** Based on discussions with key members of the deployment team, IV&V continues to recommend documenting processes, procedures, and communication protocols to eliminate ambiguity and promote a shared understanding among stakeholders. The deployment team is currently finalizing a communication protocol.	M

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

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:** BHA is actively documenting knowledge to manage staff transitions and reduce resource strain. The team is creating knowledge transfer articles to capture key information, but some gaps remain. A key challenge is converting issues into clear, documented articles, as informal communication (emails, calls, or ad hoc discussions) can bypass the help desk system. To improve consistency and visibility, BHA is working to ensure all relevant issues are properly logged as help desk cases when appropriate. To further address the resourcing challenge, DDD will be onboarding a Tosca Automated Regression Testing Subject Matter Expert (SME) in early April 2025 to improve cross-training and support. The kickoff meeting took place on 3/17/25. As part of this project, PCG will work with DDD to identify the resources and processes for the ongoing maintenance of regression testing scripts. Additionally, training will be scheduled in May 2025.	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

IV&V Findings & Recommendations

Resource Management (cont'd)

Recommendations	Status
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	**March:** There were no deployments in March 2025.	Velocity Metric Trends:

Release	Planned velocity	Actual velocity	Percentage attained
R4.11	111	-	-

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 (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
R4.9	111	71	-119
R4.10	111	162	-68

IV&V Findings & Recommendations

Project Performance Metrics (cont'd.)

Metric	Description	IV&V Observations	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	**March** - There were no deployments in March 2025. The AER team worked diligently to close all 34 defects reported during Hypercare.	N/A

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 March 2025 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
12. IV&V Interviews
13. INSPIRE Strategy Meeting

Artifacts reviewed during the March 2025 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

Eclipse IV&V® Base Standards and Checklists

Appendix C: Project Trends

Appendix C
Project Trends

	June	July	August	September	October	November	December	January	February	March
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	13	12	12	14	14	14	14	14	11	10
Issue - high	0	0	0	0	0	0	0	0	0	0
Issue - medium	8	8	8	10	10	10	10	10	7	9
Issue - low	1	1	1	1	1	1	1	1	3	0
Risk - high	0	0	0	0	0	0	0	0	0	0
Risk - medium	2	2	2	2	2	2	2	2	1	1
Risk - low	0	0	0	0	0	0	0	0	0	0
Preliminary Concern	2	1	1	2	2	2	2	2	0	0

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
DDI	Design Development Implementation
DDD	Developmental Disabilities Division
SI	System Integrator
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
MQD	Med-QUEST Division
CMS	Centers for Medicare & Medicaid Services
AER	Adverse Events Report

Appendix E
List of Production Defects

ID	Work	Divis	Title	Prior	Severity	Found	Created Date
33841	Bug	DDD	Bug - Calculator 3.0 - Users able to schedule service past ISP end date again	3	3 - Medium	PROD	5/17/2023 8:22
34110	Bug	DDD	Bug - Individual Budget unlinking from Service Authorizations	2	3 - Medium	PROD	7/27/2023 15:40
34238	Bug	CAMHD	BUG - Assessment Entity Initial Save Time - IMHE	2	3 - Medium	Prod	8/17/2023 2:33
34242	Bug	DDD	Bug - Case Merge - Contact Notes not merging; Permissions error	2	3 - Medium	PROD	8/17/2023 8:44
30634	Bug	CAMHD	CAMHD Bug - Credentialing documents not copied into PROD during Data Migration	3	3 - Medium	PROD	2/16/2021 15:45
30726	Bug	DDD	Portal signature fields do not accept touchscreen input	2	3 - Medium	PROD	9/17/2021 9:07
34969	Bug	DDD	DDD - Duplicate Provider Plans	1	3 - Medium	PROD	2/23/2024 5:58
35041	Bug	DDD	Ambulance/Emergency Medical Person is hidden on viewing in Edit Mode	2	3 - Medium	Prod	3/11/2024 8:47
33550	Bug	CAMHD	Bug: "Progress Notes Associated to Invoices" page not loading	3	3 - Medium	PROD	3/31/2023 17:11
35278	Bug	DDD	Bug - Cal3.0 - BiMonthly Recurrence authorization not taking into account Unit of Service	2	3 - Medium	PROD	6/3/2024 11:53
35317	Bug	DDD	DDD - Plan Services with no Provider Plan	2	3 - Medium	PROD	6/24/2024 9:06
35450	Bug	DDD	DDD - Calculator not printing correctly	2	3 - Medium	PROD	7/26/2024 8:36
36383	Bug	DDD	DDD - Calculator problem with paid base and add on	2	3 - Medium	PROD	9/26/2024 9:19
36854	Bug	DDD	DDD - Inspire - backed up ISP in the wrong place	1	3 - Medium	PROD	10/31/2024 3:13
37186	Bug	Both	Both - "On deactivation of Plan Service - deactivate related Provider Plan Service Flow" issue	1	3 - Medium	PROD	12/6/2024 9:10
37387	Bug	DDD	DDD - C3.0 - MYC New Service Details Not Appearing	2	3 - Medium	PROD	12/16/2024 8:30
37388	Bug	DDD	DDD - C3.0 - Change of Provider One Time Authorizations Not Splitting Units	2	3 - Medium	PROD	12/16/2024 8:33
37599	Bug	DDD	DDD - Provider cannot submit an AER due to duration error	2	2 - High	PROD	1/15/2025 10:52
37663	Bug	DDD	DDD - Data Update to Account for Missing Provider Plan Value on Plan Service	1	3 - Medium	PROD	1/23/2025 8:01
37694	Bug	DDD	DDD - TCM batch file date is different in PROD from other environments	2	3 - Medium	PROD	1/29/2025 8:25
37793	Bug	DDD	DDD - ISP Report Generation Issues	2	3 - Medium	PROD	2/10/2025 10:06
37805	Bug	Both	Both - Provider Portal Issues Opening Up Customers in PROD	1	2 - High	PROD	2/11/2025 7:34
37879	Bug	DDD	DDD - Provider Summary Report not displaying Customers in Provider Portal in PROD	1	3 - Medium	PROD	2/19/2025 8:14
38391	Bug	DDD	DDD - Inspire AER - RN signature disappears	2	3 - Medium	PROD	2/27/2025 8:27
38431	Bug	DDD	DDD - "Timelines Met by Providers" tab on "Provider Summary Report" not working	1	3 - Medium	PROD	3/3/2025 4:26
37733	Bug	DDD	DDD - Incorrect Columns displaying on Provider Plan subgrid (Action Plan tab of ISP)	1	3 - Medium	PROD	2/5/2025 5:37
37791	Bug	DDD	DDD - CIT Referral: Create Document Location Flow Failures	2	3 - Medium	PROD	2/10/2025 9:30
38496	Bug	DDD	DDD - CMU Supervisor Dashboard--LOC subgrid is blank	2	3 - Medium	PROD	3/5/2025 4:24
38529	Bug	DDD	DDD - AER Remediation Plan of Action Print Name field	2	3 - Medium	PROD	3/10/2025 3:31
38625	Bug	DDD	DDD - Calculator mid-year changes not saving	2	3 - Medium	PROD	3/14/2025 8:14
38633	Bug	DDD	DDD - When saving as draft Reporters Name Clears Out	2	3 - Medium	PROD	3/14/2025 8:28
39412	Bug	CAMHD	CAMHD - Remove single quotes in texts in Provider Referral "Selected for Service": Creation of Sub-folders in Provider Portal Document flow	2	3 - Medium	PROD	3/20/2025 10:20

Solutions that Matter

ID	Short Description	Finding Statement	Analysis and Significance	Recommendation	Finding Update	Category	Type	Priority	Status	Closure Reason	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 release deployments.	3/31/25 -The SI has updated the AER regression test scripts. Regression testing for R4.11 began on 3/25/25 and is scheduled for completion by 4/2/25. For this release, CAMHD will perform both manual and automated testing, while DDD will primarily focus on manual regression testing. To ensure continued support for future Phase 4 releases—R4.12 and beyond—the project will be onboarding a Tosca Automated Regression Testing Subject Matter Expert (SME) in early April 2025, with work scheduled to begin subsequently. This effort is expected to take place in April and May 2025. Upon completion, the INSPIRE project will have a fully updated and comprehensive set of automated test scripts. Additionally, documentation, knowledge transfer, and training will be provided to the DDD staff to ensure they can effectively maintain and update the scripts going forward. 2/28/25 - Regression Testing for R4.11 is scheduled from 3/25/2025 to 4/2/2025. CAMHD will perform both manual and automated tests, while DDD will focus exclusively on manual regression testing. To support future Phase 4 releases, including R4.11 and beyond, the project will onboard a Tosca Automated Regression Testing SME, with the work set to begin on 3/10/2025. The SI has uploaded and executed one regression test case for the AER project and is preparing additional regression test scripts with estimated completion before the R4.11 go-live. 1/31/25 - Regression Testing for R4.10 is scheduled from 1/29/2025 to 2/5/2025. One defect (view on the DDD supervisor dashboard) has come out of regression testing. CAMHD will conduct a mix of manual and automated testing, while DDD will focus on manual regression testing. To support future Phase 4 releases beyond R4.10, the project plans to onboard a Tosca automated regression testing Subject Matter Expert (SME). The plans and timeline for Tosca automated regression testing are being reviewed, with plans to commence work on 3/1/2025. For the AER project, the SI is preparing to conduct regression testing on AER functionality. 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.	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.	IV&V recommends: 1. Closer collaboration between divisions to review reported defects, ensuring a shared understanding and alignment, particularly regarding the severity and priority of production defects. 2. 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. 3. The project increases comprehensive testing prior to joint testing to reduce the burden on BHA testers and reduce post-production defects. 4. The SI vendor add a "Found In" column to the daily scrum file to indicate the environment where each defect was identified. 5. The SI vendor provides the total number of defects in production and reports these numbers regularly to BHA. 6. The project evaluate existing project staff skills and experience level to ensure they meet BHA support requirements. 7. The project perform CAMHD revenue neutrality fiscal balance testing on a quarterly basis to ensure revenues are as expected. 8. The project assign dedicated resources to provide oversight of CAMHD Fiscal Processes. 9. The project monitor implemented improvements for effectiveness. 10. Performing an RCA in collaboration with RSM after all future release deployments for continual quality improvement. 11. BHA and RSM to collaborate on the necessary revisions to the submitted design deliverables to increase level of detail and quality.	3/31/25 - The AER solution is in production. The project team closely monitored the solution to ensure stability, quickly resolve issues, and help users adjust to the new system (also known as Hypercare); Hypercare ended on 3/21/25 and the project is prioritizing the product backlog. The AER team worked diligently to close all defects reported during Hypercare. The AER solution's progress is being discussed in regular meetings between key stakeholders. Since the deployment of R4.10 on 2/6/25, the project has identified additional unresolved production defects, including 1 high-severity defect, in Azure DevOps (ADO) (see Appendix E for details). BHA is prioritizing higher-priority tasks, which has delayed the resolution of these lower-priority issues, although remediation efforts are underway. The R4.11 go-live is scheduled for 4/3/25. IV&V continues to express concern about code quality and will closely monitor R4.10, FHIR, any MSDs, and the AER solution. 2/28/25 - R4.10 was deployed to production on 2/6/2025. That same day, users reported a critical defect, prompting the deployment of a hotfix with a workaround on 2/7/2025. Following the deployment of R4.10, the project has recorded five additional unresolved production defects: two high severity, two medium severity, and one low severity, in Azure DevOps (ADO)—(see Appendix E for details). BHA is prioritizing higher-priority tasks, which has delayed addressing these lower-priority defects, though remediation efforts are underway. Additionally, the AER solution went live on 2/21/2025 and a Mid-Sprint Deployment (MSD) with 2 new items were deployed the same day. The R4.11 go-live is scheduled for 4/3/2025. IV&V remains concerned about code quality and will continue to monitor R4.10, FHIR, any MSDs, and the AER solution. 1/31/25 - The R4.10 go-live is scheduled for 2/6/2025. Currently, 25 unresolved production defects remain, including (refer to Appendix E for a list of unresolved production defects). The SI indicated that BHA prioritizes higher-priority tasks, delaying the resolution of lower-priority defects. Efforts are underway to address these issues. The FHIR development was completed and deployed to production on 1/29/25, with delays due to issues related to integrating with Microsoft and Apple Health. The AER solution go-live is scheduled for 2/21/2025. IV&V will continue to monitor the quality of both R4.10, FHIR, any MSDs, and the AER solution. 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	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	Closure Reason	Closed Date	Identified Date	Owner
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: 1. BHA and the SI explore optimization strategies, including enhancing infrastructure and database resources, improving network connectivity, balancing and scaling load, refining the test strategy, and increasing test environment resources. 2. 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.	3/31/25 - The Production system performance of the AER solution and INSPIRE remain stable with no current issues. IV&V will continue monitoring system performance for an additional month. 2/28/25 - Production system performance remains stable with no current issues; however, DDD has reported that test environments have significantly slowed down, a concern particularly evident during AER training. IV&V has reduced the risk rating to low. 1/31/25 - Microsoft completed the DDD performance test and submitted its report, showing similar results between MAX and INSPIRE. IV&V has received and reviewed the performance test report. However, the Provider Portal's performance declined as user volume increased to 500. IV&V recommends conducting performance testing at least annually to ensure system stability. 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.	Project Management	Issue	Low	Open			8/18/2023	Gautam Gulvady
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. IV&V recommends that BHA implement a structured knowledge transfer process when key personnel retire, including cross-training and documenting critical knowledge in the Dynamics Help Desk system. Regular updates to the knowledge base will maintain its accuracy, preserve essential information, and support smooth operational continuity. 2. 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. 3. DDD and CAMHD have further discussions to optimize resource utilization between the two divisions. 4. BHA should explore options for offloading project team members' daily responsibilities to other staff. 5. BHA should work quickly to create new positions and receive State approval. 6. 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. 7. BHA should explore the use of contractors to fulfill the functions for open project positions.	3/31/25 - BHA is actively documenting knowledge to manage staff transitions and reduce resource strain. The team is creating knowledge transfer articles to capture key information, but some gaps remain. A key challenge is converting issues into clear, documented articles, as informal communication (emails, calls, or ad hoc discussions) can bypass the help desk system. To improve consistency and visibility, BHA is working to ensure all relevant issues are properly logged as help desk cases when appropriate. To further address the resourcing challenge, DDD will be onboarding a Tosca Automated Regression Testing Subject Matter Expert (SME) in early April 2025 to improve cross-training and support. The kickoff meeting took place on 3/17/25. As part of this project, PCG will work with DDD to identify the resources and processes for the ongoing maintenance of regression testing scripts. Additionally, training will be scheduled in May 2025. 2/28/25 - BHA is developing a succession plan to address the potential departure of key personnel and is actively working on having resources document knowledge as team members transition. This proactive approach aims to ensure continuity and preserve essential information. One example of this effort is creating a knowledge base within the Help Desk system in Dynamics, which serves as a centralized resource for troubleshooting and support processes. By documenting processes, workflows, and troubleshooting steps, BHA ensures that future staff can access the same information and continue operations smoothly, even as experienced team members move on. 1/31/25 - IV&V was informed that some cross-training had been conducted, but concerns remain regarding the insufficient knowledge transfer for critical tasks. While a limited amount of knowledge transfer occurred concerning the provider portal, it was highlighted that more comprehensive cross-training is needed, particularly for the provider and customer portals. This would help reduce the risks associated with knowledge gaps and ensure continuity in operations, especially in the event of key personnel unavailability. DDD plans to onboard a Tosca Automated Regression Testing Subject Matter Expert (SME) to address the resourcing issue and improve cross-training. The plans and timeline for Tosca automated regression testing are being reviewed, with plans to commence work on 3/1/2025. 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	Resource Management	Issue	Medium	Open			8/18/2023	Michael Fors

ID	Short Description	Finding Statement	Analysis and Significance	Recommendation	Finding Update	Category	Type	Priority	Status	Closure Reason	Closed Date	Identified Date	Owner
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. Implement a streamlined Root Cause Analysis (RCA) process to identify deployment causes and prevent recurrence. To manage resource constraints, consider timeboxing RCA efforts—e.g., 1–2 hours per defect or a set number of hours weekly. Within this timeframe, focus on gathering context, analyzing causes, and proposing corrective actions. Project PMs can track these actions to ensure follow-through. 2. 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. 3. Ensure there are adequate and qualified resources to support the c3urrent deployment processes. This may require the support from RSM resources to provide assistance and knowledge transfer for some of the more complex deployment components. 4. As appropriate, consult with RSM on best practices that BHA could employ to support deployment. 5. 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. 6. 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. 7. The Project Team should consider evaluating potential changes to improve/enhance existing processes and communications to address current release/deployment shortfalls.	3/31/25 - It remains unclear whether RCAs (Root Cause Analyses) are adequately documented for defects deployed into production, and whether the project is effectively utilizing RCAs to minimize post-production defects. BHA has indicated that resource constraints have impeded some RCA efforts. Neglecting to implement RCA processes could result in heightened defect rates, including recurring issues due to unidentified and/or unresolved root causes. With the R4.11 go-live scheduled for 4/3/25, IV&V will continue to monitor the deployment quality of R4.10, FHIR, MSDs, and the AER solution to identify any deployment-related defects. 2/28/25 - The R4.9 deployment-related defect is yet to be addressed. R4.10 was deployed to production on 2/6/2025. That same day, users reported a critical defect, prompting the deployment of a hotfix with a workaround on 2/7/2025. Since the R4.10 deployment, five additional unresolved production defects have been logged in Azure DevOps (ADO): two high severity, two medium severity, and one low severity. Their Root Cause Analysis (RCA) is still pending. Additionally, the AER solution went live on 2/21/2025, and a Mid-Sprint Deployment (MSD) with two (2) new items were deployed the same day. The R4.11 go-live is scheduled for 4/3/2025. IV&V will continue to monitor the deployment quality of R4.10, FHIR, any MSDs, and the AER solution. 1/31/25 - R4.9 encountered deployment issues, prompting the creation of a defect in ADO. BHA is actively working to resolve these issues involving missing web resources and workflows. The R4.10 go-live is scheduled for 2/6/2025. The FHIR development was completed and deployed to production on 1/29/25, with delays due to issues related to integrating with Microsoft and Apple Health. The AER solution go-live is scheduled for 2/21/2025. IV&V will continue to monitor the deployment quality of R4.10, FHIR, any MSDs, and the AER solution. 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	Release/Deployment Planning	Issue	Low	Open			1/25/2024 - T	Gautam Gulvady
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.	Make efforts to implement a streamlined Root Cause Analysis (RCA) process to identify the causes of defects and prevent recurrence. Due to project resource constraints, propose timeboxing RCA efforts for each defect introduced into production. Timeboxing involves allocating a fixed period (e.g., 1-2 hours per defect or a set number of hours per week) for focused Root Cause Analysis (RCA) activities. These activities may include quickly gathering defect context, analyzing potential causes, and proposing corrective actions, all within the specified timeframe. Project PM(s) can oversee the tracking of corrective actions to ensure completion. IV&V recommends that, after fixing a defect, the SI incorporate relevant test cases to validate these fixes in subsequent releases. IV&V has requested discussions on various aspects of the INSPIRE testing process with a focus on process such as tracking test coverage and requirements traceability, considering new development of Access Rules, Document management/digitization. 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.	3/31/25 - The AER solution is in production. The project team closely monitored the solution to ensure stability, quickly resolve issues, and help users adjust to the new system (also known as Hypercare); Hypercare ended on 3/21/25 and the project is prioritizing the product backlog. The AER team worked diligently to close all defects reported during Hypercare. Since the deployment of R4.10 on 2/6/25, the project has identified additional unresolved production defects, including 1 high-severity defect, in Azure DevOps (ADO) (see Appendix E for details), despite testing at the unit, system integration (SIT), regression, joint, and smoke testing levels. In response, the System Integrator (SI) is enhancing smoke test scripts to provide more comprehensive coverage, including functionality such as the Provider Portal. To further strengthen quality assurance, the project will be onboarding Tosca automated regression testing expert in early April 2025, with work scheduled to begin subsequently. The expert will focus on repairing existing Tosca scripts and reinitiating automated testing efforts. 2/28/25 - R4.10 was deployed to production on 2/6/2025. Since the deployment of R4.10, five additional unresolved production defects have been recorded in Azure DevOps (ADO) (see Appendix E for details): two high severity, two medium severity, and one low severity—despite testing at the unit, SIT, regression, joint, and smoke testing levels. In response, the SI has committed to enhancing Smoke Test scripts to include more comprehensive testing, such as for the Provider Portal. The project plans to onboard an Automated Regression Testing Tool (Tosca) expert, with work planned to begin sometime in the month of March 2025. The project hopes to utilize this expert to repair their existing Tosca scripts so they can restart automated testing efforts. User Acceptance Testing for AER functionality was completed successfully with BHA approving the AER testing deliverables. The AER solution went live on 2/21/2025. 1/31/25 - IV&V has been requesting a walkthrough of the INSPIRE testing process since 10/2024, which the SI has not delivered. IV&V will continue discussions with BHA to ensure progress is made in advancing the SI's INSPIRE testing efforts. To support future Phase 4 releases beyond R4.10, the project plans to onboard a Tosca automated regression testing Subject Matter Expert (SME). The plans and timeline for Tosca automated regression testing are being reviewed with plans to commence work on 3/1/2025. UAT for AER functionality is complete, with the SI addressing defects identified during testing. Some AER testing deliverables, for example, test results, remain incomplete, while BHA and IV&V are reviewing other deliverables.	Test Practice Validation	Issue	Medium	Open			1/31/2024	Gautam Gulvady

ID	Short Description	Finding Statement	Analysis and Significance	Recommendation	Finding Update	Category	Type	Priority	Status	Closure Reason	Closed Date	Identified Date	Owner
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 needed. 7. Collaboration: The review is a collaborative effort involving the entire Scrum team. It's an opportunity for open discussion and sharing of ideas to ensure everyone is aligned on the goals and priorities. 8. Updating Documentation: Any updates or changes made during the review should be documented to ensure transparency and visibility for all stakeholders. 9. Feedback Loop: The review often generates feedback that can be used to improve the backlog management process or refine future backlog items. 10. Sprint Planning Preparation: The outcomes of the product backlog review help inform the upcoming sprint planning meeting, where the team selects items from the backlog to work on during the next sprint.	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).	3/31/25 - Product Backlog meetings are being scheduled, and the IV&V team has been invited to attend. These meetings are essential for aligning priorities, managing technical dependencies, and ensuring that backlog items are well-defined for development and testing, helping to maintain project velocity and minimize rework. 2/28/25 - BHA plans to schedule other backlog review meetings and will notify IV&V accordingly. While some meetings have already occurred, a consistent backlog review schedule is still being established. Efforts are also underway to improve the backlog review process. Regular meetings and process enhancements will help ensure alignment, facilitate timely issue resolution, and keep the project moving forward efficiently. 1/31/25 - BHA remains satisfied with the backlog prioritization. However, CAMHD, having conducted surveys and user group interviews in 2019 and 2020, is concerned that gathering feedback from a broader user base might lead to additional requests without proper prioritization. DDD mentioned that the next product backlog meeting is scheduled for Monday, 2/2/2025, due to current team availability and ongoing commitments. Additionally, IV&V will be invited to attend these backlog meetings. 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	Sprint Planning	Risk	Medium	Open			1/26/2024	Gautam Gulvady
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. BHA and the SI have discussions to align on a shared understanding of the contractual terms and conditions for the INSPIRE project. 2. 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. 3. 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. 4. Clearly define Roles and Responsibilities: clearly outlining the roles and	3/31/25 - There are no updates for this reporting period. IV&V will continue monitoring governance for an additional month. 2/28/25 - DDD clarified that, except in cases of a missed requirement, any defect found during testing incurs 0 USPs; otherwise, BHA is responsible for the cost of fixing the defect. 1/31/25—The SI's response is that the project is in a staff augmentation phase, and BHA now owns the project and decides where the SI puts its effort. 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.	Project Management	Issue	Medium	Open			2/29/2024	Gautam Gulvady

ID	Short Description	Finding Statement	Analysis and Significance	Recommendation	Finding Update	Category	Type	Priority	Status	Closure Reason	Closed Date	Identified Date	Owner
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. The project records the history of a defect's severity in the corresponding ticket's description/notes section in ADO. For example, when a hotfix is deployed to mitigate a defect initially classified as "Critical," the description/notes section should document that the defect originally had a "Critical" severity rating. 2. Based on Best Practice wipdating 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.	3/31/25 - In March 2025, the SI provided documentation that was originally created in 2019, outlining the Help Desk process. IV&V is continuing its review of the process and will provide feedback and recommendations based on best practices in April 2025. Notably, the project has placed increased attention on this area, which is a positive development. As a result of this heightened focus, IV&V has observed a corresponding rise in the number of defects being logged in Azure DevOps (ADO), indicating stronger adherence to reporting protocols and greater transparency in issue tracking. Productive discussions are underway to address critical defects. By reviewing the Help Desk process and addressing any gaps, IV&V anticipates improvements in the overall defect management approach. BHA usually receives issues by email or helpdesk calls, with most reports submitted by email. Depending on the severity of the defect, BHA personnel may consult with other team members and flag high-severity defects, reporting them to the SI. While the current process is generally effective, there is room to speed up how critical defects are handled, particularly by enhancing how these issues are initially logged. 2/28/25 - A high-priority defect occurred on 2/6/2025, bringing to light an opportunity to strengthen the project's defect management process. BHA encountered some challenges that resulted in a delay in addressing the defect. In February, there were productive discussions on addressing critical defects. The SI has provided a document outlining the Help Desk process, which IV&V will review in March 2025 to further determine the risk. 1/31/25 - During this reporting period, there continues to be a delay in creating tickets in Azure DevOps (ADO) for defects. IV&V remains concerned about the project's deviation from the Defect Management process. IV&V, BHA and the SI will continue discussions to identify process gaps and determine next steps. 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	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 a checklist to determine when a restart is necessary, 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.	3/31/25 - Based on discussions with key members of the deployment team, IV&V continues to recommend documenting processes, procedures, and communication protocols to eliminate ambiguity and promote a shared understanding among stakeholders. The deployment team is currently finalizing a communication protocol. 2/28/25 - There has been no progress for this reporting period. 1/31/25 - When an issue requiring a production Portal restart occurred only once, certain project stakeholders convened to discuss and implement the necessary steps. IV&V recommends documenting the actions taken during that meeting as part of the process for production system restarts. Documenting processes and procedures removes ambiguity and ensures a common understanding among stakeholders. 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	Project Management	Issue	Medium	Open			9/30/2024	Gautam Gulvady