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DEPT. COMM. NO. 69

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November 17, 2022

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

The Honorable Scott K. Saiki
Speaker and Members of the
House of Representatives
Thirty-First State Legislature
State Capitol, Room 431
Honolulu, Hawaiʻi 96813

Aloha Senate President Kouchi, Speaker Saiki, and Members of the Legislature:

Pursuant to HRS section 27-43.6, which requires the Chief Information Officer to submit applicable independent verification and validation (IV&V) reports to the Legislature within ten days of receiving the report, please find attached the report the Office of Enterprise Technology Services received for the State of 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,

Douglas Murdock (Nov 17, 2022 10:53 HST)

Douglas Murdock
Chief Information Officer
State of Hawaiʻi

Attachments (2)

Hawaii BHA Integrated Case Management System Project – *Phase 3*

Final IV&V Report for the period of

September 1 – September 30, 2022

Final submitted: October 14, 2022

PUBLIC CONSULTING GROUP

Solutions that Matter

Agenda

Executive Summary

IV&V Findings & Recommendations

Appendices

- A – Rating Scales
- B – Inputs
- C – Project Trends

Executive Summary

The Project deployed R3.26 to production on 9/1/2022 with no post-deployment defects. This is a notable improvement from previous releases.

The Project Team completed the backlog review in September and added RSM staff to the project to meet the demands of the re-baselined backlog work.

The current DDD Product Owner announced she will be leaving the project in early October. IV&V has opened a new high issue due to the many roles and responsibilities the DDD Product Owner performs and the short transition period.

The pending IAPDU to extend the DD&I period beyond October 2022 will be submitted in early October. IV&V will continue to monitor the status of this impactful item.

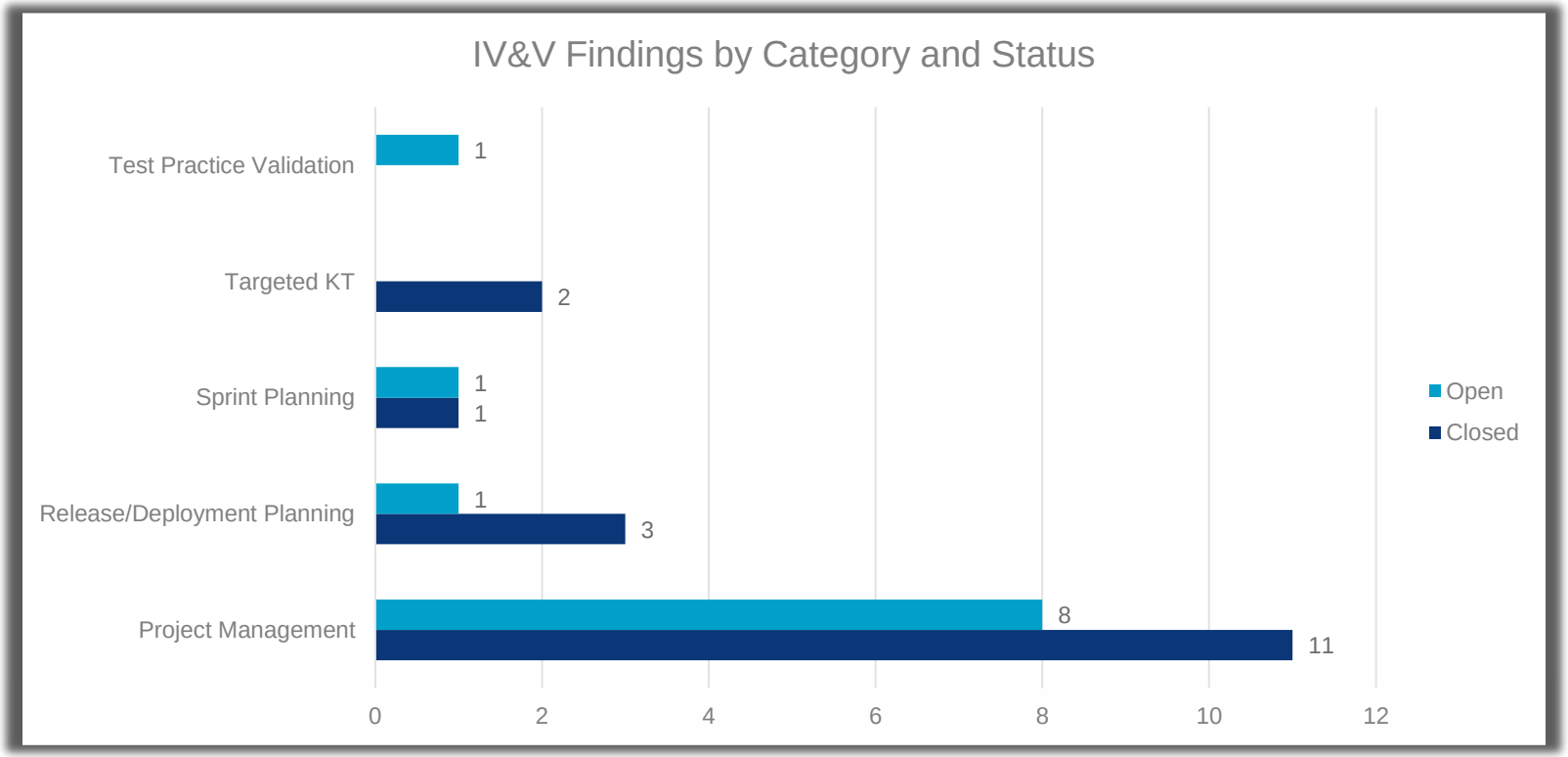
Jul	Aug	Sep	Category	IV&V Observations
R	R	R	**Sprint Planning**	The Project completed the review of the backlog to ensure it is current, manageable, and feasible to implement within the development timeframes. The IAPDU to extend the current DD&I period will be submitted to DHS and CMS in early October. The criticality rating for this category remains Red (high) for the September reporting period.
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**	Training on the Tricentis test automation tool started in September and will continue through R3.27 with full implementation targeted for R3.28. This category remains Yellow (medium criticality) for the September reporting period.
R	R	R	**Release / Deployment Planning**	There were no post-production defects attributed to deployment issues for R3.26. BHA continues to collaborate with Microsoft and RSM on deployment best practices to ensure repeatable solution upgrade deployment activities. IV&V will continue to closely monitor this high criticality category.

Executive Summary

Jul	Aug	Sep	Category	IV&V Observations
G	G	G	**OJT and KT Sessions**	The criticality rating for the OJT and KT Sessions category remains Green (low) for the September reporting period with no active findings.
G	G	G	**Targeted KT**	This category remains Green (low criticality) for the September reporting period. IV&V will continue to monitor.
G	G	G	**Project Performance Metrics**	The R3.26 defect percentage was 32% which fell short of the target of 20% or less. The velocity for R3.26 of 77 USPs also fell short of the estimated 90 USPs. IV&V will continue to monitor this category.
G	G	G	**Organizational Maturity Assessment (OMA)**	There were no updates to this category. The criticality rating for the OMA category remains Green (low).
R	R	R	**Project Management**	Quality improved in September as there were no post-production defects for R3.26. The high criticality risk opened last month to address the barriers/delays in submitting an IAPDU is still a concern for IV&V, but the IAPDU should be submitted in early October. IV&V opened a new high criticality issue related to the departure of the DDD Product Owner. The criticality rating for this category remains red this month.

Executive Summary

As of the September 2022 reporting period, there are a total of eleven (11) open findings – four High Issues, five Medium Issues, one High Risk, and one Preliminary Concern spread across the Sprint Planning, Release / Deployment Planning, Test Practice Validation, and Project Management assessment areas.



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 Transfer (KT) Sessions
- Targeted Knowledge Transfer (KT)
- Project Performance Metrics
- Organizational Maturity Assessment
- Project Management

IV&V Findings & Recommendations
Sprint Planning

#	Key Findings	Criticality Rating
7	**High Issue - The BHA Technical Team bandwidth may not be adequate to meet the needs of the project, which could compromise project productivity.** The completion of the backlog analysis and updates in previous months resulted in a backlog larger than envisioned. As a result, BHA and RSM agreed to add RSM resources to the project nearly doubling the RSM staff over the final stretch of development. This is a very positive start to resolving the overall technical staffing issue. IV&V will continue to monitor moving forward.	H

Recommendations	Status
• BHA needs, and should pursue, documentation of the Calculator 3.0 solution.	In progress
• The Project should investigate mechanisms of increasing the bandwidth of the BHA Technical Team, either by adding resources through new hires, or vendor contracts.	***Completed***
• The Project should assess, where possible, if there are responsibilities of the BHA Technical Team that can be reassigned to other project staff.	In progress
• The Project should evaluate where process inefficiencies can be addressed and streamlined to possibly free up the BHA Technical Team's availability.	In progress

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

Recommendations	Status
• BHA needs, and should pursue, additional Knowledge Transfer sessions on the updated Calculator 3.0 solution.	Completed
• The Project should consider the formation of a first level resource team to triage/address production defects in a timely manner, without disrupting new development work.	Completed
• The Project should consider procurement of an online training toolset to support OCM and technical efforts to offset the need for in-person training.	Completed

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 and/or deprecating existing functionality in the production environment**. Regression testing was successfully completed for R3.26 which was promoted to production on 9/1/2022. There were no post go-live bugs reported. A Tricentis project kick-off was conducted on 9/2/2022 with ongoing training in progress through R3.27. R3.28 remains the target release for full implementation and execution of the test automation tool.	M

Recommendations	Status
• Pursuing additional formal training in AzureDevOps for test automation at the earliest possible juncture and commence efforts to automate at least the 2 primary regression test scripts.	In progress
• IV&V recommends DDD and CAMHD develop a common and consistent approach across divisions for regression testing.	Completed
• 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.	Completed

IV&V Findings & Recommendations

Test Practice Validation (cont'd)

Recommendations	Status
• Updating the regression test scripts to ensure consistency with system configuration.	Completed
• Modifying release schedules to allow for regression testing timeframes.	Completed
• Planning releases by functionality type to avoid unnecessary repetitive work being performed in any given section of the solution.	Completed
• Performing regression testing after every release, or possibly every other release, or potentially tying regression tests to FSU releases. In addition, consider alternating the DDD and CAMHD scripts every other release.	Completed
• Modifying regression test scripts to start AFTER case creation, limiting the time it takes to execute. (This recommendation was for a point in time and is no longer valid.)	Completed
• Implementing 'hard' code freeze dates as well as test environment deployment dates to ensure that testing and deployment activities are not rushed.	Completed
• Modifying the deployment scripts based on information gained from previous release deployments.	Completed

IV&V Findings & Recommendations

Test Practice Validation (cont'd)

Recommendations	Status
• Consulting with RSM to determine how the 'interim testing processes' can be improved until such time that automated testing is available for repeatable and complete industry standard regression testing.	Completed
• IV&V recommends performing an RCA in collaboration with RSM for the continued concerns with regression testing efforts.	Completed

IV&V Findings & Recommendations

Release / Deployment Planning

#	Key Findings	Criticality Rating
18	**High Issue - Due to ongoing deployment processes and technical execution issues, the Project may continue to encounter defects and challenges in meeting projected timelines for production and non-production deployments.** The R3.26 release was deployed to production on 9/1/2022, using the patch deployment methods. The upcoming R3.27 and R3.28 releases will require full solution upgrades (FSU) for deployment based on their entity contents. FSUs have historically been quite challenging for the project, inferring that this may increase risk to these releases. To help mitigate the risk, BHA continues to collaborate with Microsoft and RSM on deployment best practices. While BHA continues to increase their learning, they acknowledge that there are still several unknowns in terms of applying those practices. The team's knowledge gaps for repeatable deployment activities are not fully understood. The R3.27 FSU was successfully moved to the test environment prior to the end of September, and the production promotion is planned for mid-October. IV&V will continue to monitor this high exposure issue.	H

Recommendations	Status
• 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.	In Progress
• As appropriate, consult with RSM on best practices that BHA could employ to support deployment.	In Progress

IV&V Findings & Recommendations

Release / Deployment Planning (cont'd)

Recommendations	Status
• Request the assistance of the RSM Solution Architect in reviewing and correcting issues associated with consistency of the 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.	In Progress
• 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.	In Progress
• The Project Team should consider evaluating potential changes to improve/enhance existing processes and communications to address current release/deployment shortfalls.	In Progress
• IV&V recommends performing an RCA in collaboration with RSM for the continued concerns surrounding environment differences.	In Progress
• 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.	In Progress
• Look at implementing 'hard' code freeze dates as well as test environment deployment dates to ensure that testing and deployment activities are not rushed.	Completed
• 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.	Completed
• Work in collaboration with RSM to establish a transition plan for DOH to assume all deployment activities to ensure complete ownership of these processes. This should assist with consistency in approach and execution going forward.	Completed

IV&V Findings & Recommendations

Release / Deployment Planning (cont'd)

Recommendations	Status
• 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.	Completed
• Due to an error prone process of 'cherry picking' what is and what is not ready for deployment, IV&V recommends that DOH and RSM collaborate to determine an improved manner for managing DOH environments. (As a result of how the current development environment is being managed, 'cherry picking' components to deploy will continue to occur. This recommendation is closed.)	Closed

IV&V Findings & Recommendations

Project Management

#	Key Findings	Criticality Rating
14	**Medium Issue - Due to multiple quality concerns, the Project may continue to face impactful system defects.** R3.26 was deployed to production on 9/1/2022. No post-deployment defects were identified following this release which is the first occurrence in at least the last five releases. IV&V will continue to monitor this medium exposure issue.	M

Recommendations	Status
• Evaluate existing project staff skills and experience level 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
• Assign dedicated resources to provide oversight of CAMHD Fiscal Processes.	In Progress
• Monitor implemented IV&V recommendations for effectiveness.	In Progress

IV&V Findings & Recommendations

Project Management (cont'd)

Recommendations	Status
• IV&V recommends performing an RCA in collaboration with RSM after all future release deployments for continual quality improvement.	Completed
• BHA and RSM to collaborate on the necessary revisions to the submitted design deliverables to increase level of detail and quality.	Completed
• Perform typical project testing including System Integration, User Acceptance, Performance, and Regression Testing.	Completed
• Dedicate sufficient time in between releases for BHA and RSM to execute/implement RCA correction actions to reduce the volume of unplanned rework.	Completed

IV&V Findings & Recommendations

Project Management (cont'd)

#	Key Findings	Criticality Rating
12	**Medium Issue – PII/PHI data in non-production environments.** The Security Assessment is pending approval by the ASO. RSM is planning to address this issue as part of the backlog scope for R3.28. IV&V will continue to monitor this medium criticality issue.	M

Recommendations	Status
• IV&V recommends DOH consider limiting the volume of environments with PII/PHI data and access necessary to support development work, which should help minimize this risk.	Open
• IV&V recommends if production data is necessary in any non-production environment that DOH establishes a plan for effectively managing the security of the PII/PHI data, including the potential masking of data.	In Progress
• IV&V recommends that DOH mitigates this finding by minimizing and/or masking PHI/PII data in designated non-production environments.	In Progress

IV&V Findings & Recommendations

Project Management (cont'd)

#	Key Findings	Criticality Rating
21	**Medium Issue – Unplanned rework may have an impact on delivering DDI functionality by the end of the DDI period.** The defect percentage of USPs deployed to production climbed again in September. R3.26 had an estimated velocity of 90 USPs, and 77 USPs were promoted to production. Thirty-two percent (32%) of all USPs in R3.26 were attributable to defects, while 68% of the total USPs were associated with planned user stories and requests. This September metric falls short of the target of no more than 20% of the total USPs promoted during the month. IV&V will continue to monitor this medium criticality finding.	M

Recommendations	Status
• Reduce the amount of unplanned rework by continuing to focus on quality improvement measures.	In Progress
• Strive for defect performance metric not to exceed 20% of all user story points in any given release.	In Progress

IV&V Findings & Recommendations

Project Management (cont'd)

#	Key Findings	Criticality Rating
22	**High Issue - The project schedules for 'big boulder' functionality development are slipping.** 'Big Boulder' prioritized features/functionality implementation schedules continued to slide and change priority during September. While staffing was increased, velocity fell far short of expectations for R3.27. The planned project velocity was 330 USPs for R3.27, however, the latest statistics indicate that the total will be short of 100 USPs. Velocity is likely to increase moving forward as the additional RSM staff ramps up and adjusts to the project's requirements and expectations.	H

Recommendations	Status
• Extend the current DDI timeframe to allow for the completion of 'big boulder' interfaces functionality development.	In Progress
• BHA to add more resources to support the development of "big boulder' interfaces functionality.	***Completed***

IV&V Findings & Recommendations

Project Management (cont'd)

#	Key Findings	Criticality Rating
25	**Medium Issue - The lack of a formal project governance structure is impeding decision-making procedures and overall leadership cohesiveness.** The Project Charter was signed and approved during September, which is the first step in enacting a formal governance process for the project. IV&V will continue to monitor the governance activities.	M

Recommendations	Status
• Establish a formal project governance structure to allow CAMHD, DDD, and other divisions to 1) have a single point of accountability, 2) ensure the right projects are approved, 3) outline roles, responsibility and relationships among project stakeholders, 4) provide issue management and resolution, and 5) help with information dissemination and transparent communication.	In Progress

IV&V Findings & Recommendations

Project Management (cont'd)

#	Key Findings	Criticality Rating
26	**Preliminary Concern - The inability for BHA staff to work remotely is decreasing productivity and causing morale issues amongst team members.** Project team members have reported decreased productivity. There is a strong likelihood of the Project losing team members due to their inability to work remotely, as evidenced by a current Help Desk employee retiring and the DDD Product Owner leaving BHA and citing this as one of the reasons. The Department may consider granting remote work.	N/A

IV&V Findings & Recommendations

Project Management (cont'd)

#	Key Findings	Criticality Rating
27	**High Risk - The current DDI period expires at the end of October 2022 which will require RSM to transition the D365 solution to the State prior to contract end.** Efforts to submit an IAPDU to pursue CMS Federal funding approval for extending DD&I through May 2023 have progressed in September and BHA plans on submitting the IAPDU to CMS in early October. If the IAPDU is not approved by the end of October, the project will be at major risk.	H

Recommendations	Status
• DHS to reconcile current claims invoicing discrepancies.	In Progress

IV&V Findings & Recommendations

Project Management (cont'd)

#	Key Findings	Criticality Rating
28	***New High Issue*** **- The DDD Product Owner resigned her position in September and will transition off the project in early October.** The absence of the current DDD Product Owner will cause major challenges for DDD as she wore multiple hats and is responsible for many aspects of the day-to-day work from both an administrative and business perspective.	H

Recommendations	Status
• IV&V recommends a formal transition plan be fully defined and executed prior to the DDD Product Owner departure.	***Completed***
• IV&V recommends DDD seek (internal/external) multiple staff to replace the DDD Product Owner for each role served.	***New***
• IV&V recommends DDD consider soliciting contracted staff to fill the immediate gaps with the DDD Product Owner's departure.	***New***

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 for Phase 3	**September** - Available velocity was estimated at 90 user story points for R3.26 and a total of 77 user story points were promoted to production. This was accomplished with two (2) very small mid-sprint deployments in late August and early September coupled with the final release on September 1, 2022. The overall cumulative Phase 3 targeted USP's was planned for 2,197 and the actual USP count is now 2,879.27. Overall, this continues to exceed expectations for volume of work performed.	N/A

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) • US Points assigned to defects in a release vs US Points assigned to planned US in a release	**September** - R3.26 was deployed to production on September 1, 2022, with a total of 77 USPs. • 68% of the total USPs were associated with planned user stories and requests. • 32% of the total USPs were associated with defects that were either encountered during the release or pulled from the backlog. The defect ratio in September 2022 did not meet the target threshold of 20% or less of the total USPs in any given release.	N/A

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 September 2022 reporting period:

1. Daily Scrum Meetings (selected)
2. Twice Weekly RSM Issues Meeting
3. Weekly BHA-ITS Project Status Meeting
4. Bi-Weekly Check-in: CAMHD
5. Bi-Weekly Check-in: DDD
6. IV&V Draft IV&V Status Review Meeting with DOH
7. IV&V Draft IV&V Status Review Meeting with RSM and DOH

Artifacts reviewed during the September 2022 reporting period:

1. Daily Scrum Notes (selected)
2. Twice Weekly Issues Meeting Notes (selected)

Eclipse IV&V® Base Standards and Checklists

Document

Appendix C: Project Trends

Appendix C
Project Trends

Trend: Overall Project Health										
Process Area	2021/2022									
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
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										
Total Open Findings	**8**	**8**	**7**	**7**	**7**	**7**	**8**	**9**	**10**	**11**
Issue - high	1	1	1	2	2	2	3	3	3	4
Issue - medium	4	4	4	4	4	5	5	5	5	5
Issue - low	3	3	2	1	1	0	0	0	0	0
Risk - high	0	0	0	0	0	0	0	0	1	1
Risk - medium	0	0	0	0	0	0	0	0	0	0
Risk - low	0	0	0	0	0	0	0	0	0	0
Preliminary Concern	0	0	0	0	0	0	0	1	1	1

Solutions that Matter

ID	Date Identified	Finding	Finding Statement	Supporting Analysis	PCG Recommendation	Finding Update	Process Area	Finding Type	Priority	Status	Risk Owner	Closure Reason
1.00	12/31/2019	Detailed investigation into the project's sprint planning processes and adoption of generally accepted agile best practices.	IV&V is currently investigating the following topics as they relate to Sprint Planning and the project's overall approach to agile software development: - IV&V acknowledges that the project is now planning three sprints outs, however, it appears that only a "high-level" sprint planning roadmap has been produced, and it is unclear exactly how the project is targeting features for each release through the end of Mod 4. - IV&V is not aware of how the project is currently defining "done" for Mod 3 and Mod 4Additionally, in the January 2020 reporting period, IV&V will seek additional information and visibility into the project's processes specific to prioritizing requests and how user stories in TFS are tagged to features, as well as the realignment of project development and configuration resources to complete the scope of Release	While having a high level roadmap is good, the project should be able to identify what feature enhancements will be targeted for each planned release. This roadmap will help the project manage scope and productivity. Relatedly, the "definition done" is an important artifact to ensure that the project is successful. Otherwise, the project will struggle to prioritize requests/enhancements and manage scope.	As much as possible, the project should identify what feature enhancements will be targeted for each Release and should clearly map out the roadmap out through the last Phase 3 release in September 2020.Additionally, the project should clearly define "Done" to ensure the project team is working towards the same goal and increase opportunities for success. Having a clear "definition of done" will help provide the project with guidance on how to stay within scope.	01/31/2020 - IV&V is closing this concern, and will be tracking items related to Definition of Done, roadmap, resourcing, and backlog grooming in new, separate findings.	Sprint Planning	Preliminary Concern	N/A	Closed	Ramesh, Vijaya (PCG)	Due to multiple new items being tracked at a more granular level, this item has been closed.
2.00	12/31/2019	As a result of regression testing not being consistently performed, production releases are breaking and/or deprecating 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 is necessary to prevent both defects and the deprecation of production functionality 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.	Pursuing additional formal training in AzureDevOps for test automation at the earliest possible juncture and commence efforts to automate at least the 2 primary regression test scripts. IV&V recommends DDD and CAMHD to develop a common and consistent approach across divisions for performing regression testing. 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. Updating the regression test scripts to ensure consistency with system configuration. Modifying release schedules to allow for regression testing timeframes Planning releases by functionality type to avoid unnecessary repetitive work being performed in any given section of the solution.	09/30/2022 - Regression testing was successfully completed for R3.26 which was promoted to production on 9/1/2022. There were no post go-live bugs reported. A Tricentis project kick-off was conducted on 9/2/2022 with ongoing training in progress through R3.27. R3.28 remains the target release for full implementation and execution of the test automation tool. 08/31/2022 - Regression testing is currently underway for R3.26 which is planned to be promoted to production on 9/1/2022. The Project has published a plan for implementing the Tricentis tool which kicks-off on 9/2/2022. The Tricentis Implementation Plan is detailed and comprehensive. Test automation is expected to commence with R3.27 and full integration (test automation and test result tracking) is targeted for R3.28. IV&V will continue to monitor the progress of the Tricentis tool implementation. 07/31/2022 - This high criticality finding continues to be the most impactful issue affecting the Project. Helpdesk team members brought in to assist and support the deployment team continue to improve their skills and experience with the last	Test Practice Validation	Issue	Medium	Open	Darren Macdonald	

3.00	12/31/2019	Usage of open source JavaScript framework for development and ongoing maintenance of Calculator 3.0 requires BHA to take a proactive approach to support and security.	IV&V learned in December 2019 that the Calculator 3.0 functionality is built in Vue.JS, an open source JavaScript framework. As this framework is relatively new, the open source support community is small. IV&V's concerns include: - The availability of reliable support for Vue.JS - The project's understanding of any known vulnerabilities with Vue.JS, and development of a process to remain current on vulnerabilities discovered by the support community. - The RSM lead for Calculator 3.0 went on extended parental leave in December 2019IV&V acknowledges that BHA has downloaded Vue.JS to start getting familiar with it.	Open source tools and frameworks offer organizations great opportunities to build and configure customized solutions at lower costs than through software purchase or licensing. However, open source tools and frameworks often do not come with support models, other than those offered through the tool's community. Because of this, the organization bears the weight of seeking out reliable help and support, as well as much take a proactive approach to security and identifying any vulnerabilities in the tools.	IV&V recommends BHA work to establish a reliable and repeatable process for keeping abreast of communal updates and support opportunities for a new suite of tools - CompletedIV&V recommends BHA continue to hold targeted KT sessions with RSM on maintaining Calculator 3.0 via a suite of tools, and determine what additional skillsets, training, and/or resources are needed to support BHA's long-term ownership of Calculator 3.0 - Completed	08/31/2020 - IV&V is unaware of any additional KT gaps being identified by DOH, and as such, is closing this finding.07/31/2020 - The Project resolved the majority of the outstanding Calculator 3.0 defects during July which was implemented in the mid-sprint release on 7/17/2020. The final Calculator 3.0 Knowledge Transfer session was conducted on 7/17/2020. IV&V recommends BHA to identify and communicate any additional KT gaps to RSM during the month of August. If no additional needs are identified, IV&V will close this finding. 06/30/2020 - The project continued to focus attention on the Calculator 3.0 defects during the month of June. RSM conducted another Calculator 3.0 Knowledge Transfer session on 6/26/2020 and scheduled a final session for 7/17/2020. 05/31/2020 - The project continued to focus attention on the Calculator 3.0 user stories and defects during the month of May. RSM conducted another Calculator 3.0 Knowledge Transfer session on 5/29/2020 which IV&V attended. This session included the new C3.0 year-end changes. Additional KT sessions is planned for and IV&V will continue to monitor this project component	Targeted KT	Risk	Low	Closed	Darren Macdonald	RSM has successfully held several KT sessions for this technology and functionality, and DOH staff have stated that it was well received.
4.00	1/31/2020	Due to the project not following a detailed deployment script, the project may continue to experience defects related to deployment activities.	There have been several defects pushed to production with Phase 3 releases. Some of the defects introduced to production have been narrowed down to environmental promotional activities. In these instances, the DEV and TEST environments were not in sync with the production environment (missing business rules, missing components, missing dependencies, etc.). IVV is aware that DOH staff shadowed RSM staff for all deployment releases during Phase 2 with RSM providing instruction and DOH staff physically executing the tasks and activities via keyboard. For Phase 3, it is unclear whether a complete, up to date, and documented deployment script, or deployment notes, are being utilized by BHA for deployment activities.	A complete, up to date, and documented deployment script is needed to ensure the repeatability and stability of DOH's production deployments. Since there are currently two deployment types (patches and full solution upgrades), two scripts may be warranted. An embedded process and documented script will help ensure that mistakes are minimized, and that functionality is not mistakenly deprecated when deployments take place.	IVV recommends documenting deployment scripts for both the patch method and the full solution upgrade method. The script(s) should be in the form of a step-by-step procedure that walks through from start to finish of the deployment process and involve several technical staff to ensure staff availability to accomplish these tasks when primary deployment personnel are unavailable. Standardize the content of all developer deployment task notes, with a goal of eliminating any potential ambiguity to the Deployment Team, resulting in a cleaner and more repeatable set of deployment processes and instructions.	12/31/2020 - IV&V has closed this issue as the related recommendations below has been completed. A subsequent medium issue finding (#19) has been opened to address ongoing deployment processes and technical execution issues. 11/30/2020 - Release 3.10 was promoted to production on 11/11/2020. Approximately nine (9) new defects were identified after the deployment. Root causes are suspected to be a combination of insufficient testing from a business perspective coupled with deployment issues. A bulk record update task required as part of the implementation was not included in the deployment, resulting in contacts being deprecated from the Circle of Support in Inspire. It is unclear if any other deployment issues may have also contributed to the new defects. Deployment corrections were applied in a mid sprint release on 11/27/2020. Based on the recurrence of this finding, IV&V has changed this Risk to an Issue and will continue to monitor until resolved. 10/31/2020 - The RSM and DOH Teams have collaborated to develop a detailed Production Deployment Guide for R3.10 and are in the process of rehearsing some of the	Release/Deployment Pl	Issue	Medium	Closed	Darren Macdonald	Key finding has been addressed and proposed IV&V recommendations have been completed. A subsequent finding #19 has been created to address on-going deployment processes and technical execution issues.

5.00	1/31/2020	The project lacks a documented 'Definition of Done", which could challenge the project's ability to fully achieve the goals of Phase 3.	BHA does not have a documented 'Definition of Done' (DOD) for the BHA Top 100 User Stories of for Phase 3. Because of this, it is unclear how proposed functionality/features are prioritized for each sprint, and throughout Phase 3.	The 'Definition of Done" document guides the Project's vision, business, and technical goals that are important inputs for stakeholders to develop a Roadmap for Phase 3. Without the 'Definition of Done' document, the project is likely to struggle to prioritize proposed functionality/features which may be equally important but are at odds with each other.	Project is currently in the process of creating the Definition of Done. IV&V recommends that the project create this document and socialize this with project team before end of Feb 2020IV&V recommends that the project consider the items from the prioritized list, available resources and define "Done" as a percentage of the identified priority list with room for flexibility to add any other features/enhancements that will be identified during Phase 3.	02/29/2020 - The project created and documented the Phase 3 Definition of Done and socialized it in February. IV&V recommends the project continually review and update the Definition of Done, adjusting as/if necessary. IV&V will continue to monitor the project's adherence to Definition of Done and progress against it but is closing out this concern as of the February report.	Project Management	Preliminary Concern	N/A	Closed	Ramesh, Vijaya (PCG)	Definition of Done completed and socialized.
6.00	1/31/2020	The lack of consistent backlog grooming could result in the project backlog having obsolete, non-estimated, and poorly defined user stories.	The backlog of defects, requests, and user stories continues to grow. Currently, there are approximately 429 defects and requests, of which almost 200 have a status of 'New'. IVV notes that a large percentage of the backlogged work items do not have user story points estimated. Many of the items listed in the backlog are old, and some may have had needs or requirements change over time or may now be obsolete. IV&V notes that DDD and CAMHD have initiated this effort and agreed to prioritize grooming the backlog by the end of February.	A comprehensive, up-to-date backlog is a primary tenet of agile software development. If a backlog is carrying work items that may not ever be completed for any reason, they should be removed from the backlog to ensure its viability.	IVV recommends that CAMHD and DDD groom the backlog to bring it as current and accurate as possible. This should include deprecating items no longer needed, and fully defining those items that are not yet fully defined, readying them for configuration or developer resources. To the extent feasible, BHA should involve RSM SMEs in this process, if only for the interim to get "caught up" on grooming efforts. (Closed)VV recommends that the project consider utilizing an age-based methodology for the deprecation of 'older' user stories in the backlog that may no longer be applicable or needed by the Product Owners and developing a process for periodic cleansing of the backlog using the same methodology. (Closed)	06/30/2020 - IV&V has observed for another month that the project continues to groom the backlog. As a result, we are closing this finding.05/31/2020 - The project team has determined the backlog grooming effort has caught up, as details for release 3.9 are completed and 3.10 is near completion. IV&V will keep this finding open for an additional month to validate that the backlog continues to be groomed as new stories and defects are identified. Efforts to keep the backlog groomed should take place each month so that release planning efforts are not delayed. 04/30/2020 - The project reported that 97% of the original backlog has been estimated at this time. That said, CAMHD has determined that there are several older, and possibly no longer necessary user stories in the backlog that are candidates for deletion. IV&V will keep this finding open and will re-assess it for impact during the month of May.03/31/2020 - IV&V validates that the backlog grooming effort has made great progress, however it is still in progress. The revised target date for completion was most recently 3/31/2020. The estimation effort has reached 94% completion at the end of	Project Management	Risk	Low	Closed	Darren Macdonald	The project has demonstrated they are consistently grooming the backlog.

7.00	1/31/2020	The BHA Technical Team bandwidth may not be adequate to meet the needs of the project, which could compromise project productivity.	The BHA Technical Team plays a role that is critical to project success. Currently, the responsibilities associated with the BHA Technical Team have expanded beyond their collective available bandwidth. IV&V notes that BHA began addressing this bandwidth issue, which includes increased collaboration with key RSM resources, and are working to potentially change the structure of the Technical Team.	The BHA Technical Team leads the efforts of all technical DOH staff on the project. As such, the Team's time is both extremely valuable and scarce. If the Team's expected workload exceeds bandwidth, the project could experience bottlenecks. Optimization of the BHA Technical Team's time is to the benefit of the project and plays a critical role in the project's ability to hit performance targets and achieve the Phase 3 definition of done.	BHA needs, and should pursue, additional Knowledge Transfer sessions on the updated Calculator 3.0 solution The Project should investigate mechanisms of increasing the bandwidth of the BHA Technical Team, either by adding resources through new hires, or vendor contracts. The Project should assess, where possible, if there are responsibilities of the BHA Technical Team that can be reassigned to other project staff. The Project should evaluate where process inefficiencies can be addressed and streamlined to possibly free up the BHA Technical Team's availability. The Project should consider the formation of a first level resource team to triage/address production defects in a timely manner, without disrupting new development work. The Project should consider procurement of an online training	09/30/2022 - The completion of the backlog analysis and updates in previous months resulted in a backlog larger than envisioned. As a result, BHA and RSM agreed to add RSM resources to the project nearly doubling the RSM staff over the final stretch of development. This is a very positive start to resolving the overall technical staffing issue. IV&V will continue to monitor moving forward. 08/31/2022 - Although BHA leadership continued to meet during August to address the Project's resource shortages and develop a mitigation plan to address this issue, no measurable progress was attained. A critical resource change for the current RSM Solutions Architect was announced during August, which only serves to compound the existing resource shortage issue and potentially impact overall quality. IV&V will continue to monitor this high criticality issue. 07/31/2022 - This high criticality finding continues to be the most impactful issue affecting the Project. Helpdesk team members brought in to assist and support the deployment team continue to improve their skills and experience with the last couple of releases and the recent mid-sprint	Sprint Planning	Issue	High	Open	Darren Macdonald	
8.00	1/31/2020	The lack of a Product Roadmap that provides direction on the top product features to be delivered in the near term (next 3 months), midterm, and long term could have an adverse impact on the Project's scope and schedule.	BHA does not have a single, definitive Product Roadmap for Phase 3 that addresses the functionalities, features, and / or enhancements to be built in order to fully address BHA's business needs. IV&V met with RSM and BHA on this topic in January, and notes that the project is actively working to address this concern.	A Roadmap is a tool that guides an agile project on what functionalities/features are targeted to be built and released and when users can have access to these functionalities. Without a defined Roadmap the project may not be able to effectively scope the top features to be released within Phase 3 and ensure the correct resources are available to accomplish the goal of each sprint and the Phase.	IV&V understands that the Project is in the process of creating a Short Term; Mid Term, and Long Term Roadmap. IV&V recommends the Project complete this by the end of February 2020 to understand if there are any constraints (resources, budget) that may hinder the project from releasing the needed functionalities/features targeted for Phase 3 as documented in the Definition of Done.	02/29/2020 - In February, the project further defined the Phase 3 Product Roadmap and aligned it with the Phase 3 Definition of Done. IV&V recommends the project continually review and update both the Product Roadmap and Definition of Done, adjusting as necessary. IV&V will continue to monitor the project's adherence to the Product Roadmap and progress against it but is closing out this concern as of the February report.	Project Management	Preliminary Concern	N/A	Closed	Ramesh, Vijaya (PCG)	Product Roadmap aligned with Definition of Done

9.00	3/31/2020	The COVID-19 pandemic and the related "stay at home" order could hinder project activities and negatively impact the project schedule and budget.	On 3/23/2020, the Governor issued a “stay at home, work from home order” that has reduced state departments ability to be fully functional as the large majority of state workers will be required to work from home/remotely at least until the end of April and some offices may be completely shut down until that time as well. Unclear if the order will extend beyond that date.	DOH stakeholder participation in key activities could be significantly hindered, not only by required remote work by DOH and SI staff, but also by the flood of activities that could occur as the department could become overwhelmed processing and providing services due to the resulting economic impacts to citizens. Some stakeholders may be unable (due to stricter shutdown policies) or unwilling to perform these activities during this chaotic time. Planned SI on-site visits will also likely be changed to remote which could reduce the effectiveness of their project activities. Going forward most if not all project activities will more than likely be conducted remotely until this crisis passes.	- IV&V recommends BHA to ramp up efforts to setup, train, and assist stakeholders on remote work devices and tools and make every effort to help them to become highly functional with remote access technology (e.g. MSTeams/Skype) - Completed- IV&V recommends the project and DOH create a detailed, documented risk mitigation strategy and plan that is reviewed regularly and revised to address the current state of the COVID-19 threat and related impacts over the next 6 to 12 months - In Progress - IV&V recommends updates to the OCM Plan to include any new activities or updates to planned activities to aid the organization through this COVID-19 situation in the short and long term - Open	04/30/2021 - The Project continues to maintain its ability to operate with staff working remotely, effectively overcoming the “stay at home, work from home order” that reduced BHA's ability to be fully functional in the office. The potential DDD and CAMHD budget challenges reported in March were also overcome during April, providing fiscal relief to BHA. As such, IV&V is closing this finding.03/31/2021 - The Project continued to maintain its ability to operate with staff working remotely, while COVID-related responsibilities continue to grow for CAMHD Leadership. The Governor announced that potential furloughs and/or layoffs of State workers will no longer be necessary based on the signing of the American Rescue Plan. IV&V has reduced the priority of this finding from Medium to Low and will continue to monitor moving forward. 02/28/2021 - As reported in January, there were no substantive changes observed for this finding in February. The Project continued to maintain its ability to operate with staff working remotely. IV&V continues to note that there may be potential future budget actions by the Governor due to projected State budget	Project Management	Risk	Low	Closed	Darren Macdonald	The Project continues to maintain its ability to operate with staff working remotely, effectively overcoming the “stay at home, work from home order” that reduced BHA's ability to be fully functional in the office. The potential DDD and CAMHD budget challenges reported in March were also overcome during April, providing fiscal relief to BHA.
10.00	5/31/2020	The lack of design reviews for complex user stories has resulted in the promotion of incomplete solutions into production.	There were a couple incidents during May where the code promoted to production did not fully meet all requirements of associated user stories for CAMHD Progress Notes. The components that were developed and implemented were functional, however the effort was complicated by additional requirements being added during development that necessitated additional changes to the design. IV&V will continue to monitor the design review activity for large user stories moving forward	If all requirements within a functional design are not met, users could experience the inability to complete required processes, resulting in incomplete data collection and potential issues in service delivery.	IV&V recommends (and DOH has commenced) conducting technical design reviews for complex user stories prior to development to ensure designs are complete and all requirements associated with the design are met. IV&V observed this activity has been implemented by DOH in the month of May.	07/31/2020 - The Project continues to to spend additional time on the designs of complex user stories during June to ensure requirements and user story components were fully captured in design sessions. This process change has proven successful, and as such, IV&V recommends closing this concern.06/30/2020 - IV&V acknowledges the Project Team continued to spend additional time on the designs of complex user stories during June to ensure requirements and user story components were fully captured in design sessions. IV&V will continue to monitor in July.	Sprint Planning	Preliminary Concern	N/A	Closed	Darren Macdonald	This process change to spend extra time on the design of complex user stories to ensure that all requirements are represented has proven to be successful.

11.00	7/31/2020	DDD Project resource shortages may have a continued negative effect on user adoption, training, and overall OCM activities.	The user adoption and training efforts are hampered based on staffing shortages. DDD has stated that its users have been found to not be utilizing the system to its fullest extent in terms of system workflow, provide their insights and input, follow up, etc. To assist in OCM activities, DDD has defined the need for an interactive training tool to support Inspire.	The significance and impact of OCM can never be understated. It is clearly a best practice that best that all staff utilize the solution in the same manner. Variations in how the system is utilized by its users is likely to cause variations in data collection and analytical efforts using the data collected.	IV&V recommends that BHA does as much as possible within its sphere of influence to increase user adoption and training. This includes procurement of the online training toolsets to offset the need for in-person training, and adding staff as needed to support OCM and technical efforts. IV&V recommends DOH perform a detailed investigation of the specific variations as to how the system is currently being used by the user community. Consequently, users would be provided with constructive feedback on how the system should be utilized where gaps exist. This will likely lead to additional refresher training to close identified system knowledge gaps.	03/31/2021 - The DDD staff who've been part of the review process are pleased with the quality of the videos produced within the toolset and have determined that the toolset is a very helpful training tool for DDD staff and providers. As such, IV&V is closing this finding.02/28/2021 - Training videos using the new toolset were nearing completion by the end of February. DOH is currently reviewing the drafts of the second set of videos and work is progressing well. IV&V will continue to monitor this finding until DDD has had sufficient time to determine the overall quality of the training work products and whether the new toolset is addressing user adoption and staffing shortages for these task efforts. 01/31/2021 - Training design activities using the interactive training toolset commenced in January and has attained good progress. The use of this tool is expected to provide some bandwidth relief for DDD staff members responsible for onboarding new staff members and providers, and to provide refresher training to existing staff members. IV&V will continue to monitor this finding12/31/2020 - The contract to procure the interactive training toolset for	Project Management	Risk	N/A	Closed	Darren Macdonald	The DDD staff who've been part of the review process are pleased with the quality of the videos produced within the toolset, and have determined that the toolset is a very helpful training tool for DDD staff and providers.
12.00	8/31/2020	PII/PHI data in non-production environments	IV&V has been made aware that PII/PHI data currently exist in a non-production environment to meet project needs. Generally this is not a good security practice as the presence of PII/PHI data in non-production environments increases the potential for theft, loss or exposure thus increasing the organization's risk. Failure to secure PII/PHI data leaves the organization open to highly targeted social engineering attacks, heavy regulatory fines, and loss of client trust and loyalty.	Failure to secure PII/PHI data leaves the organization open to highly targeted social engineering attacks, heavy regulatory fines, and loss of client trust and loyalty.	IV&V recommends DOH consider limiting the volume of environments with PII/PHI data and access necessary to support development work, which should help minimize this risk. IV&V recommends if production data is necessary in any non-production environment that DOH establishes a plan for effectively managing the security of the PII/PHI data, including the potential masking of data. IV&V recommends that DOH mitigates this finding by minimizing and/or masking PHI/PII data in designated non-production environments.	09/30/2022 - The Security Assessment is pending approval by the ASO. RSM is planning to address this issue as part of the backlog scope for R3.28. IV&V will continue to monitor this medium criticality issue. 08/31/2022 - As reported in previous months, there were no substantive changes to this finding identified in August. The Security Assessment will commence after the associated contracts are executed and it is unclear when this will occur. BHA plans to work with RSM to consider solutions used on other projects for managing the PII/PHI data in non-production environments. IV&V will continue to monitor this medium criticality issue. 07/31/2022 - As reported in previous months, there were no substantive changes to this finding identified during July. The Security Assessment will commence after the associated contracts are executed and it is unclear when this will occur. BHA plans to work with RSM to seek proposed solutions used on other projects for managing the PII/PHI data in non-production environments. IV&V will continue to monitor this medium criticality issue. 06/30/2022 - There were no substantive	Project Management	Issue	Medium	Open	Darren Macdonald	

13.00	8/31/2020	Project not able to access Activity Logs	The Project recently deployed audit log functionality into production whereby these logs can be accessed and exported as needed. However, IV&V was made aware access to activity logging for users with just view permissions will not be available from Microsoft in the public sector environment until the end of September 2020. The unavailability of these specific activity logs could potentially hamper the investigation of future security events until implemented.	The unavailability of activity logs may hamper the investigation of future security breaches.	IV&V recommends that DHS continues to collaborate with Microsoft until the activity logging feature is available in all BHA non-production environments.	03/31/2021 - Per BHA, this finding is no longer an issue and recommends closure. IV&V is closing this finding.02/28/2021 - BHA continued this effort in February despite a workaround being necessary from Microsoft due to a layering issue. Based on continued delays, it is unclear when this important security activity will be completed. IV&V will continue to monitor this finding. (Per Kamu, this status information did not correctly reflect the issue as the layering issue has no relation to the activity logs.)01/31/2021 - The implementation effort for this activity moved forward in January. Some of the entities will have activity logging completed in the planned early February Release 3.12, while others will be delayed until Release 3.13. IVV will continue to monitor. 12/31/2020 - The planning effort for identifying the entities that will require activation of the new activity logs was completed during December. The implementation effort has been prioritized for inclusion in Release 3.12. IV&V will continue to monitor this finding until implemented. 11/30/2020 - The DOH technical team has commenced the	Release/Deployment Pl	Risk	N/A	Closed	Darren Macdonald	Finding has been resolved.
14.00	9/30/2020	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	The identified quality issues have negatively affected DOH billing processes and DOH has stated these are the most impactful defects discovered to date.	Evaluate existing project staff skills and experience level to ensure they meet BHA support requirements. Perform 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	09/30/2022 - R3.26 was deployed to production on 9/1/2022. No post-deployment defects were identified following this release which is the first occurrence in at least the last five releases. IV&V will continue to monitor this medium exposure issue. 08/31/2022 - A formal Root Cause Analysis (RCA) was conducted in early August for R3.25 critical defects. Most of the critical defects were attributed to deployment issues which require additional analysis to determine the source of these issues. IV&V will continue to monitor this medium criticality finding. 07/31/2022 - As with the previous release, the Project encountered quality issues as five (5) post-production defects were identified for R3.25 which was deployed on 7/21/2022. A formal Root Case Analysis (RCA) is planned for the first week in August and it remains uncertain if coding, deployment, or other quality issues were the potential cause for these defects. To address these defects, two of the critical items was deployed in a Mid Sprint Deployment on 7/26/2022 and another critical item is planned for a second Mid	Project Management	Issue	Medium	Open	Darren Macdonald	

15.00	10/5/2020	Usage of Semantics and IDM for development and ongoing maintenance of the system requires BHA to take a proactive approach to support of these tools.	The project noted its intent to obtain more targeted knowledge transfer of both the Semantics Reporting and IDM tools. IV&V will continue to monitor this concern.	Default	Default	01/31/2021 - The project has made great strides addressing this concern. A Semantics Layer KT session was conducted on 1/29/21 and multiple IDM and Semantic Layer sessions has been scheduled in February. IV&V is closing this finding as we no longer view this item as a concern.12/31/2020 - IV&V is aware that an overview of the Semantics Layer KT session was held on 12/16/20. The planning effort will result in additional Semantic Layer and IDM KT sessions in the coming months. IV&V will continue to monitor this finding.11/30/2020 - The project conducted two high-level overview sessions of the Semantic Layer Reporting tools during November. One session was focused on the overall Semantic Layer, and the second session was focused on Semantic Layer Security. Additional targeted Knowledge Transfer sessions on the Semantic Layer tools will need to be provided by RSM; however, these have not been scheduled. IV&V will continue to monitor this finding.10/31/2020 - The project intends to obtain more targeted knowledge transfer for both the Semantics Reporting and IDM tools and will be planning and scheduling	Targeted KT	Preliminary Concern	N/A	Closed	Darren Macdonald	The project has made good progress establishing and initial execution of the IDM and Semantics Layer KT plan.
16.00	10/27/2020	The bandwidth of CAMHD Leadership is being hampered by planning tasks and activities for assessing project expansion to other divisions.	CAMHD has been provided with an approval to commence planning efforts for expansion of the project for ADAD and AMHD & HSH. CAMHD Leadership currently spends 25% of their available time dedicated to this planning effort.	CAMDH Leadership participation in key activities could be significantly hindered by the flood of activities that could occur as the department assesses expansion of this project to the balance of divisions.	IV&V recommends CAMHD look for opportunities to augment the management staffing for planning Phase 4 and M&O work.	06/30/2021 - As anticipated, the CAMHD Leadership time dedicated to the Project has returned to normal and expected levels. As such, IV&V is closing this finding. 05/31/2021 - As anticipated, CAMHD Leadership time spent on efforts outside of the Inspire Project reduced during May. This level of effort decreased to approximately 10% of available time in May, largely for the planning of the Max/Inspire divisional expansion effort. As such, IV&V is reducing the priority of this finding from Medium to Low and will continue to monitor.04/30/2021 - CAMHD Leadership time spent on efforts outside of the INSPIRE Project continued to increase during early April but has decreased at the end of the month. Approximately 60-70% of Leadership time was spent on Phase 4 Planning, COVID Remediation, and the new Vaccine Registration application efforts. The CAMHD level of effort is anticipated to decrease to approximately 20% in May as DOH has hired a Project Manager in April who will be dedicated to the Vaccine Registration Project, instead of BHA resources IV&V will continue to monitor this finding.03/31/2021 - CAMHD	Project Management	Risk	N/A	Closed	Darren Macdonald	CAMHD Leadership time dedicated to the project has returned to normal.

17.00	11/30/2020	Due to consistent technical issues requiring escalation to Microsoft, some project efforts are being delayed.	The IDM and Semantic layer efforts have experienced several delays attributable to issues escalated to Microsoft. The issues have ranged from administrative / communication (entering issues into the Commercial support instance vs the Government Cloud support instance), to several key technical issues requiring assistance to resolve. To date, these support needs have added over a month to the IDM and Semantic Layer project schedules.	Default	IV&V recommends the project to continue to monitor the status of outstanding Microsoft tickets and to escalate the priority of these tickets as deemed necessary.	08/31/2021 -The number of issues requiring assistance from Microsoft continues to remain limited, and as such, IV&V is closing this finding. 07/31/2021 - While the number of issues requiring assistance from Microsoft remains limited, interactions with Microsoft are increasing again due to the interface functionality planned for implementation in the current and remaining DD&I releases. The FHIR API interface has required multiple interactions with Microsoft that have resulted in unplanned schedule slippages for the FHIR API implementation. IV&V will continue to monitor this finding. 06/30/2021 - The number of issues requiring assistance from Microsoft continues to be low with only two known items open. As such, IV&V is reducing the priority of this finding to low and will continue to monitor.05/31/2021 - There is only one open Microsoft ticket affecting the attachment of Claims to the Batch. As such, IV&V is reducing the criticality of this finding from High to Medium and will continue to monitor. 04/30/2021 - BHA continues to work with Microsoft on technical issues as they arise in the Government Community Cloud (GCC)	Release/Deployment Pl	Issue	N/A	Closed	Darren Macdonald	The volume of interactions needed with Microsoft remains low and manageable. This condition is no longer impeding project progress.
18.00	12/31/2020	Due to on-going deployment processes and technical execution issues, the Project may continue to encounter defects and challenges in meeting projected timelines for production and non-production deployments.	There have been several defects pushed to production with Phase 3 releases. Some of the defects introduced to production have been narrowed down to environmental promotional activities. In these instances, the DEV and TEST environments were not in sync with the production environment (missing business rules, missing components, missing dependencies, etc.). IVV is aware that DOH staff shadowed RSM staff for all deployment releases during Phase 2 with RSM providing instruction and DOH staff physically executing the tasks and activities via keyboard. For Phase 3, it is unclear whether a complete, up to date, and documented deployment script, or deployment notes, are being utilized by BHA for deployment activities.	Repeatable documented release and deployment will help ensure that mistakes are minimized, and that functionality is not mistakenly deprecated when deployments take place.	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. Work in collaboration with RSM to establish a transition plan for DOH to assume all deployment activities to ensure complete ownership of these processes. This should assist with consistency in approach and execution going forward. As appropriate, consult with RSM on best practices that BHA could employ to support deployment. Request the assistance of the RSM Solution Architect in reviewing and correcting issues associated with consistency of the configurations across environments, ensuring that the test environment is capable of testing ALL functions of any	09/30/2022 - The R3.26 release was deployed to production on 9/1/2022, using the patch deployment methods. The upcoming R3.27 and R3.28 releases will require full solution upgrades (FSU) for deployment based on their entity contents. FSUs have historically been quite challenging for the project, inferring that this may increase risk to these releases. To help mitigate the risk, BHA continues to collaborate with Microsoft and RSM on deployment best practices. While BHA continues to increase their learning, they acknowledge that there are still several unknowns in terms of applying those practices. The team's knowledge gaps for repeatable deployment activities are not fully understood. The R3.27 FSU was successfully moved to the test environment prior to the end of September, and the production promotion is planned for mid-October. IV&V will continue to monitor this high exposure issue. 08/31/2022 - The current R3.26 release was planned to be a Full Solution Upgrade (FSU) but instead the technical team has again pivoted to the use of patch deployments. The project is currently planning to promote	Release/Deployment Pl	Issue	High	Open	Darren Macdonald	

19.00	3/28/2021	The pending RSM contract expiration will require BHA to perform transition of the D365 solution to the State prior to contract end.	The RSM contract for Phase 3 is currently planned to complete in September 2021. BHA will need a transition plan to ensure that it has all knowledge transfer and is fully capable of managing all aspects of supporting and maintaining the D365 solution without vendor support until at least the Phase 4 expansion effort is procured and initiated. The Phase 4 effort is currently expected to commence late in the 4th quarter of 2021, or early in the first quarter of 2022. The Phase 4 procurement scope is planned to include additional DD&I activities, as well as M&O support activities.	DOH needs to be in a position to completely stand on its own without the assistance of vendor support by fall of 2021. If DOH is not in a position to solely take on the development of user stories, testing, regression testing, deployment, and the support and maintenance of the entire system, there is a risk that environment stability may be challenged.	Work hand in hand with RSM to ensure that DOH has the knowledge, skills, and capabilities to perform all aspects of the project prior to September 2021. If the knowledge transfer takes more time than planned, consider developing, testing, and promoting less releases in the summer months as the transition off of vendor support approaches.	05/31/2021 - Per CAMHD, the RSM contract amendments to extend the DD&I effort (Mod 5) to the end of December 2021 and also provide M&O services (Mod 6) through May 2022 were fully executed in May. IV&V is closing this preliminary concern. 04/30/2021 - The RSM contract amendment is still pending approval. This amendment will extend the DD&I effort (Mod 5) to the end of December 2021 and will also provide M&O services (Mod 6) through May 2022. Mod 5 is expected to be approved in May 2021. This will delay the near-term need for a Transition Plan until first quarter 2022. IV&V will continue to monitor this finding.	Project Management	Preliminary Concern	N/A	Closed	Vic Dudoit	The RSM amendments were fully executed in May 2021.
20.00	4/30/2021	The DDD Project Manager will be on leave and unavailable to the project starting in May.	The DDD Project Manager performs most of the project duties on behalf of DDD and her absence may cause an increased level of risk to the project. DDD has commenced planning efforts and has assigned staff to backfill her, although they are currently assigned to other project tasks and activities. IV&V will continue to monitor this preliminary concern.	The DDD Project Manager is critical to all daily project interactions affecting DDD from a functional and managerial perspective. If her duties are not re-assigned to capable staff prior to her planned absence, DDD will be in a challenged position to effectively contribute to at least the next several releases.	1) IV&V recommends DDD to continue to look for opportunities to augment the existing technical staff in order to fully support current DDI project work.2) IV&V recommends DDD to consider augmenting their current PM/Business staff in order to allow their technical staff to focus on technical duties.	08/31/2021 - The DDD Project Manager returned from her absence, alleviating the DDD technical staff bandwidth/workload challenges. IV&V is closing this finding.07/31/2021 - The DDD technical staff continued to face bandwidth/workload challenges during the month of July. Fortunately, the DDD Project Manager is scheduled to return to work on 8/2/2021 allowing the technical staff to return fully to their technical responsibilities.06/30/2021 - The absence of the DDD Project Manager continues to cause bandwidth/workload challenges for DDD technical staff. Time available for typical DDD CRM assignments was limited in June due to this resource constraint. IV&V has promoted this finding from a Preliminary Concern to a Medium criticality issue and will continue to monitor. 05/31/2021 - The highest priority tasks and activities typically accomplished by the DDD Project Manager have been re-assigned to other DDD staff. IV&V notes that this results in some level of bandwidth/workload challenges for DDD technical staff.	Project Management	Issue	N/A	Closed	Darren Macdonald	The DDD Project Manager has returned from her leave, fully mitigating this issue.

21.00	6/30/2021	Unplanned rework may have an impact on delivering DDI Functionality by the end of the DDI period.	The continued volume of unplanned rework may have an impact on delivering planned DDI functionality with only 4 possible DDI releases remaining for completion.	Release defect metrics for unplanned rework has been 30-40% of the total USPs for the last few releases.	Reduce the amount of unplanned rework by continuing to focus on quality improvement measures. Strive for defect performance metric not to exceed 20% of all user story points in any given release.	09/30/2022 - The defect percentage of USPs deployed to production climbed again in September. R3.26 had an estimated velocity of 90 USPs, and 77 USPs were promoted to production. Thirty-two percent (32%) of all USPs in R3.26 were attributable to defects, while 68% of the total USPs were associated with planned user stories and requests. This September metric falls short of the target of no more than 20% of the total USPs promoted during the month. IV&V will continue to monitor this medium criticality finding. 08/31/2022 - There were no planned releases for the month of August and consequently no velocity or defect metrics to report this month. IV&V will report out these metrics in our September status report. 07/31/2022 - R3.25 was deployed on 07/21/2022 and the associated defect percentage significantly improved from previous releases. The percentage dropped to 15%, well within the target of 20%. IV&V will continue to monitor this medium criticality finding. 06/30/2022 - The defect percentages for R3.24 were improved in June; however, the	Project Management	Issue	Medium	Open	Darren Macdonald	
22.00	7/30/2021	The project schedules for 'big boulder' interface functionality development are slipping.	The FHIR interface and CAFAS interface are currently at risk of not making the planned R3.17 release. The Single Sign on components of the HHIE interface are also currently at risk of not making the planned R3.17 release, and the ADT/Labs components have already missed needed intermediate target dates for the planned R3.17 release. The Project will need to re-assess the planned implementation dates for these 'big boulder' interfaces, including identification of the timing needs by the business teams. At a minimum, the CAFAS and HHIE interfaces are needed by the program. IV&V also notes that there are several new high priority requests related to the DDD Provider Portal and 27 production flow jobs that need to be reviewed for replacement of older dataverse connectors that are known by Microsoft to have	Weekly RSM Status Report	Extend the current DDI timeframe to allow for the completion of 'big boulder' interfaces functionality development. BHA to add more resources to support the development of "big boulder' interfaces functionality.	09/30/2022 - 'Big Boulder' prioritized features/functionality implementation schedules continued to slide and change priority during September. While staffing was increased, velocity fell far short of expectations for R3.27. The planned project velocity was 330 USPs for R3.27, however, the latest statistics indicate that the total will be short of 100 USPs. Velocity is likely to increase moving forward as the additional RSM staff ramps up and adjusts to the project's requirements and expectations. 08/31/2022 - The Project spent a significant amount of time in August assessing and grooming the backlog to determine if user stories for CAMHD, DDD, or both divisions are accurately reflected and deemed executable and ready for project team consumption. Most of that effort has been completed. 'Big Boulder' prioritized features/functionality implementation schedules continued to slide and change priority during August, largely due to resource constraints and external dependencies. 07/31/2022 - 'Big Boulder' prioritized features/functionality implementation	Project Management	Issue	High	Open	Darren Macdonald	

23.00	7/31/2021	The current DDI period expires at the end of December 2021 which will require RSM to transition of the D365 solution to the State prior to contract end.	The current Project Staffing Model shows a planned reduction in RSM resources support starting in September 2021 through December 2021. Prior to this timeframe, BHA should commence the development of a transition plan to ensure the appropriate replacement State resources are identified/secured and the necessary knowledge transfer sessions are planned and executed with RSM. BHA will need to be sure they are ready to take on the development of user stories, testing, deployment, and the support and maintenance of the entire system by the end of the DDI period (December 2021).	Existing contractual agreements.	Obtain IAPDU approval from CMS.	02/28/2022 - The IAPDU was approved by Federal partners in early February, which extended the DD&I effort through October 2022. Transition from RSM will not be required until approximately August 2022. Based on the extended time being available for transition efforts, IV&V is closing this finding. 01/31/2022 - There were no substantive changes to this finding observed during January as BHA continues to pursue CMS Federal funding approval for extending DD&I through October 2022 followed by M&O through September 2024. IV&V will continue to monitor this finding until Federal funding approved. 12/31/2021 - There were no substantive changes to this finding observed during December as BHA continues to pursue CMS Federal funding approval for extending DD&I through October 2022 followed by M&O through September 2024. IV&V will continue to monitor this finding until Federal funding approved. 11/30/2021 - There were no substantive changes to this finding observed during November. In late October, PAC approved the funding request for extending DD&I	Project Management	Issue	Low	Closed	Darren Macdonald	
24.00	10/29/2021	The R3.19 Solution Upgrade technical issues are delaying the implementation of the release and the ability for staff to develop and test code.	Solution upgrades are essential for keeping the system current in order to gain access to new features that enhance productivity, eliminate bottlenecks and govern sensitive information. The current R3.19 solution upgrade work efforts that includes patches for 5 releases (R3.15-R3.19) is causing technical issues. As a result, R3.19+ development and testing work is hampered until these technical issues are resolved.	Daily Scrum Reporting	Ensure there are adequate and qualified resources to support the current Solution Upgrade processes. This may require the support from RSM resources to provide assistance and knowledge transfer. As appropriate, consult with RSM on best practices that BHA could employ to support the Solution Upgrade.	11/30/2021 - R3.19 was promoted to production as an FSU on 11/14/2021 and access to the development and test environments was again restored. Because the solution upgrade was the first in five (5) releases, the deployment process took approximately 12 hours. This issue did have an impact both on the amount of DDI functionality (reduced) included in downstream releases and cost implications. IV&V has closed this finding, as it was alleviated by the R3.19 release on 11/14/2021. 10/31/2021 - Due to the current R3.19 Solution Upgrade technical issues, staff have been advised to stay out of the development and test environments until the issues have been resolved. As a result, development and testing for R3.19 and forward are affected by this issue. IV&V will continue to monitor this high priority issue until resolved.	Project Management	Issue	High	Closed	Darren Macdonald	Technical issue resolved and were attributed to the following: • Import of solution taking 1-2 hours, timed out in PROD, so had to restore and then restart from a previous point in time backup • Errors are vague – sometimes indicating “failure” but actually successful • MS moving away from Classic UI which is changing the availability of some functionality / how • Corrupt MDA encountered in SIT update

25.00	6/30/2022	The lack of a formal project governance structure is impeding decision-making procedures and overall leadership cohesiveness.	The impact of poor project governance can lead to: •Untimely and/or uninformed decision-making •Project delays and overruns •Breakdown in communications and collaboration •An erosion of project team trust	The strategic goals and objectives of CAMHD and DDD differ but both divisions need equal and fair representation of how work is being prioritized and performed.	Establish a formal project governance structure to allow CAMHD, DDD, and other divisions to 1) have a single point of accountability, 2) ensure the right projects are approved, 3) outline roles, responsibility and relationships among project stakeholders, 4) provide issue management and resolution, and 5) help with information dissemination and transparent communication.	09/30/2022 - The Project Charter was signed and approved during September, which is the first step in enacting a formal governance process for the project. IV&V will continue to monitor the governance activities. 08/31/2022 - A Project Charter has been developed but it is unclear to IV&V when it will be approved by the Executive Steering Committee to commence activities related to formal Project Governance. 07/31/2022 - A Project Charter has been developed and is in process of review and approval by the Executive Steering Committee to commence activities related to formal Project Governance. 06/30/2022 - As expected, the priorities and goals of DDD and CAMHD are not the same. This often leads to disagreements on work priorities causing Project delays and overruns, breakdown in communications and collaboration, and an erosion of project team trust.	Project Management	Issue	Medium	Work In Progress	Vic Dudoit	
26.00	7/31/2022	The inability for BHA staff to work remotely is decreasing productivity and causing morale issues amongst team members.	Project team members have reported decreased productivity and there is a strong likelihood of the Project losing team members due to their inability to work remotely. This is evidenced by a current Help Desk employee retiring early and citing this as the reason. The Department may consider granting remote work to improve productivity and help increase morale to help ensure the existing short-staffed issue is not further exacerbated.	Project team members have reported decreased productivity and there is a strong likelihood of the Project losing team members due to their inability to work remotely. This is evidenced by a current Help Desk employee retiring early and citing this as the reason.	The Department may consider granting remote work to improve productivity and help increase morale to help ensure the existing short-staffed issue is not further exacerbated.		Project Management	Preliminary Concern	N/A	Open	Vic Dudoit	
27.00	8/31/2022	The current DDI period expires at the end of October 2022 which will require RSM to transition the D365 solution to the State prior to contract end.	Efforts to submit an IAPDU to pursue CMS Federal funding approval for extending DD&I through May 2023 have been stalled as a result of claims invoicing discrepancies.	DHS/MQD identified discrepancies with invoicing BHA claims which they are reconciling prior to the submission of an IAPDU.	DHS to reconcile current claims invoicing discrepancies.	09/30/2022 - Efforts to submit an IAPDU to pursue CMS Federal funding approval for extending DD&I through May 2023 have progressed in September and BHA plans on submitting the IAPDU to CMS in early October. If the IAPDU is not approved by the end of October, the project will be at major risk.	Project Management	Risk	High	Open	Vic Dudoit	

28.00	9/30/2022	The DDD Product Owner resigned her position in September and will transition off the project in early October.	The absence of the current DDD Product Owner will cause major challenges for DDD as she wore multiple hats and is responsible for many aspects of the day-to-day work from both an administrative and business perspective.	DDD Product Owner announced her departure in September 2022 for early October. DDD Product Owner wears multiple hats supporting both business and administrative functions.	IV&V recommends a formal transition plan be fully defined and executed prior to the DDD Product Owner departure. IV&V recommends DDD seek (internal/external) multiple staff to replace the DDD Product Owner for each role served. IV&V recommends DDD consider soliciting contracted staff to fill the immediate gaps with the DDD Product Owner's departure.		Project Management	Issue	High	Open	Vic Dudoit	