pennsylvania
DEPARTMENT OF HUMAN SERVICES

MMIS 2020 Platform

Initial Defect Management Plan

Version 3.0

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Deliverable Name: Initial Defect Management Plan

Contents

1. Document History

The following table is a record of revisions made to this document. The table includes three columns. The first column identifies the date the document was revised. The second column identifies the document version number, and the third column includes a brief description of the changes made to the document text.

Date	Version #	Description
5/15/2019	1.0	Initial submission
7/5/2019	1.1	Revised version per the Department's review comments and resubmitted
9/6/2019	2.0	Revised version per the Department's review comments and resubmitted
10/16/2019	2.1	Edits after Department review
11/26/2019	3.0	Revised version per the Department's review comments and to use new approved template.

A master list of acronyms used throughout this document is available in **Appendix H: MMIS 2020 Platform Acronyms**.

2. Introduction

The Initial Defect Management Plan (Initial DMP) provides the approach, activities, and roles for handling defects identified as part of the MMIS 2020 Platform Project. The Initial DMP also includes activities associated with the defect management strategy, reporting, preparing for and conducting the triage meeting, and actions related to updating research results and decision review. The plan's primary goal is to clearly identify the necessary MMIS 2020 Platform Project defect management activities, durations, and stakeholder expectations and responsibilities.

The Initial DMP will span the Development, Implementation, and Maintenance and Operations (M&O) phases of the project and will be used in conjunction with the SI/DH and MMIS 2020 Platform module vendors' Defect Management Plans.

Development Phase

During the Development Phase (until the Systems Integrator/Data Hub (SI/DH) contractor's Customer Relationship Management (CRM) tool is available, a period not to exceed six months from the effective contract start date of the SI/DH contractor), defect management will be a manual process through the use of DocuShare. Two main documents will be used to track defects: (1) the Defect Tracking Sheet containing the list of defects and status information and (2) a Defect Report document that will contain detailed information, such as the steps to reproduce the defect and screen shots related to the defect. Templates for these documents are provided in Appendix E, Initial DMP Toolkit, and will be also stored in DocuShare. The MMIS 2020 Platform Project will have only non-production defects during this phase as no modules will be in Production.

Implementation Phase

The Implementation Phase starts once the SI/DH contractor joins the project and the CRM tool is available to use for defect management. Since a staggered implementation strategy is being used for the MMIS 2020 Platform Project, some MMIS 2020 Platform modules will be in Production while others will not. Processes for production and non-production defects will be defined during this phase.

Maintenance and Operations (M&O) Phase

The M&O phase starts once the last MMIS 2020 Platform module is deployed to Production. There will be two types of defects during this phase: (1) production defects and (2) non-production defects related to Module Changes (MCs). Requested system changes and defect fixes during the M&O Phase will be prioritized by the Change Control Board (CCB) and will be deployed as part of regularly scheduled releases.

Note: Throughout this document, specific Initial DMP requirements from the ITC/QA contractor Request for Proposal (RFP) are provided in *italics*.

3. Approach

The selected Offeror is responsible for defect management of the MMIS 2020 Platform.

The Initial DMP provides a systematic way to reliably track and prioritize defects identified during the Development, Implementation, and M&O phases of the project. This will enable the MMIS 2020 Platform Project team to process the backlog of defects and to identify a remediation plan to resolve them.

The Initial DMP provides guidance for the tracking, monitoring, and reporting of defects identified during testing prior to go-live and the production defects post-go-live by the ITC/QA contractor, the Department, the SI/DH contractor, the Tier 2 Support Center, or the MMIS 2020 Platform module contractors. If there are any defects identified during MMIS 2020 Platform Project testing and the root cause is legacy (MMIS – PROMISe™) system functionality, those defects will also be tracked per the defect management process described in this plan.

The following graphic demonstrates the high-level defect management lifecycle, which comprises five steps: (1) Identify, (2) Confirm, (3) Verify, (4) Resolve, and (5) Validate.

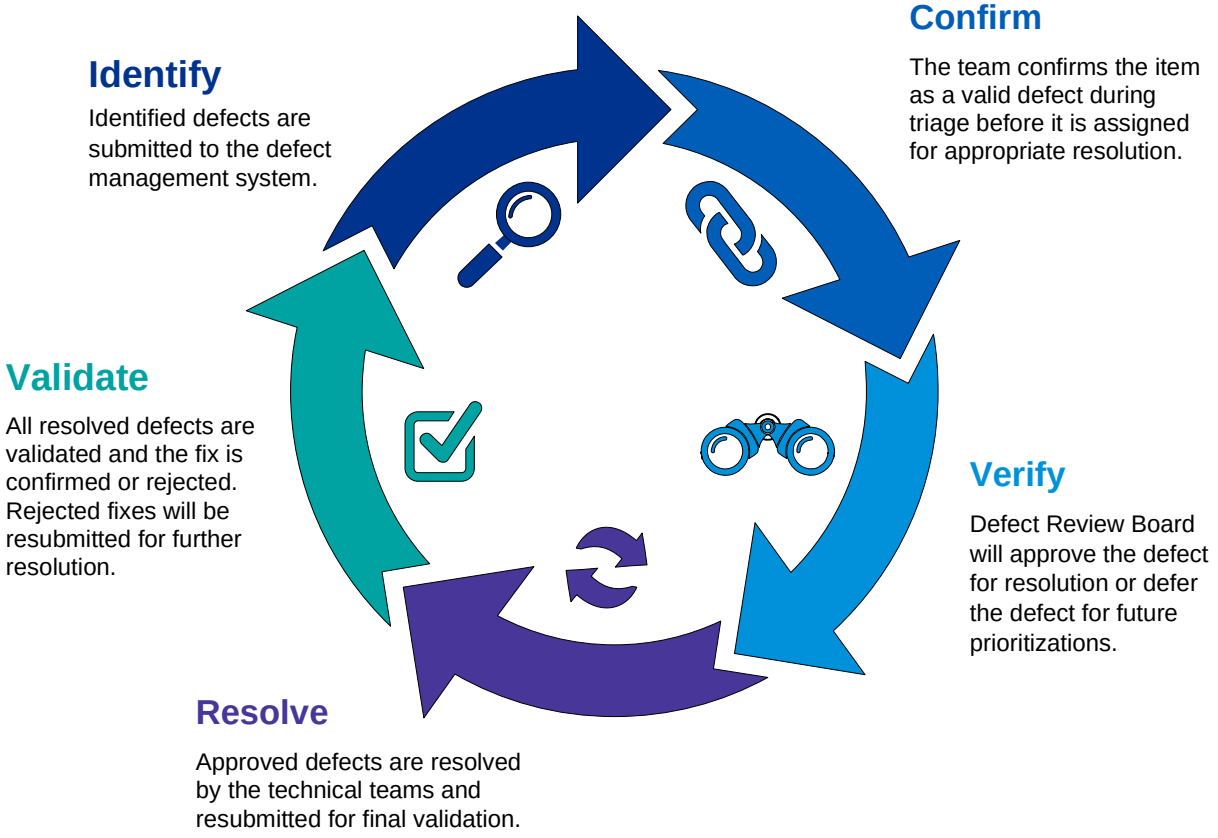

Figure 1. High-Level Defect Management Process

The Defect Review Board (DRB) is a team consisting of the Department, the ITC/QA contractor, the SI/DH contractor, and the MMIS 2020 Platform module contractors. As described in Figure 1 above, once defects are identified, the DRB is where coordination across the vendors is centrally performed. When necessary, defects that require escalation will be brought before the DRB for verification and to set resolution priority. Approved defects will be resolved by an assigned development team. The defect will be submitted for validation post resolution. If the validation is rejected, the defect is resubmitted for further review and remediation.

> *The selected Offeror must design, develop, implement, and maintain the Defect Management Plan to identify, track, monitor, and report defects identified during testing or as identified by the Department or by other MMIS 2020 Platform stakeholders. The Defect Management Plan must include defects that have dependencies on other modules or services.*

Steps to Design

The defect management process that will be followed during the Development, Implementation, and M&O phases is provided in this section.

Development Phase

Only non-production defects will be created during the Development Phase. These defects are identified during one of the different levels of testing for the MMIS 2020 Platform Project such as unit testing, integration testing, system testing, and User Acceptance Testing (UAT). Figure 2 below outlines the steps for managing non-production defects. The CRM tool will not be available during this phase so defect management will be done manually. A Defect Tracking Sheet will be maintained in DocuShare. When the defect is identified, the defect details will be entered in this spreadsheet by the submitter, and an accompanying Defect Report document with the reproduction steps and any relevant screen shots will be uploaded in DocuShare. A new Defect Report is created for each defect. The templates for the Defect Tracking Sheet and Defect Report are included in Appendix E, Initial DMP Toolkit.

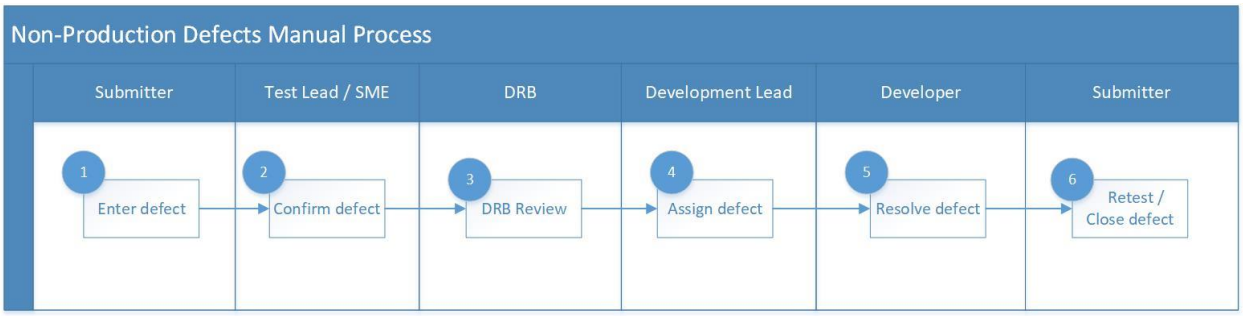

Figure 2. Non-production Defects Manual Process

The following table provides additional step-wise detail on the defect management process during the Development Phase.

Step Description	Tracking and Documentation Update
Step 1: Enter Defect Submitter enters a defect. The submitter of the defect can be an individual from the ITC/QA contractor, the SI/DH contractor, the MMIS 2020 Platform module contractors, or the Department.	**The submitter will make the following updates in the Defect Tracking Sheet:** • Create a new row • Set “Status” = “Submitted” • Set “Assigned To” = Test Lead The Test Lead name is determined as part of test planning for the particular test level being executed. Additional fields will be filled in as per the **Instructions** tab in the tracking sheet. Submitter will also create a new Defect Report document and upload it to DocuShare. Refer to Appendix E for additional guidance and file naming convention.
Step 2: Confirm Defect The following activities will be performed by the Test Lead: • Verify that all details and steps are provided to reproduce the defect in the Defect Report document • Verify that the correct MMIS module name is mentioned • Verify whether the defect is valid or invalid If required, the Test Lead will work with a subject-matter expert (SME) for this review.	**If the defect is determined to be valid, Test Lead will make the following updates to the Defect Tracking Sheet:** • Set “Assigned To” = Development Lead Name • Set “Status” = “Open” • Proceed to Step 3 **If the defect is determined to be Invalid**, **the Test Lead will make the following updates in the Defect Tracking Sheet:** • Set “Assigned To” = Submitter's Name • Set “Status” = “Rejected” • Update “Notes” with the explanation as to why the defect is invalid. Submitter will review the defect notes added by the Test Lead. Proceed with 2a or 2b depending on submitter review outcome.
Step 2a. Confirm Defect – Submitter agrees to Close The submitter agrees with the rejection of the defect.	**Submitter will make the following updates to the Defect Tracking Sheet:** • Set “Status” = “Closed” • Update the “Notes” acknowledging closure The process will end after this step.
Step 2b. Confirm Defect – Proceed with DRB The submitter disagrees with the rejection of the defect. The Test Lead, SME, and the submitter will convene for a discussion. If submitter agrees with	**If no consensus is made to close the defect, the following updates are made and process moves to Step 3:** • Set “Status” = “Open” • Submitter updates “Notes” to provide additional information on the submitter, Test Lead, and SME discussion. This can be because clarification is

Step Description	Tracking and Documentation Update
closure after the discussion, proceed to Step 2a.	needed on a requirement, or help is needed to determine if a defect should be an enhancement, etc. • "Assigned To" should be set to the most appropriate person who can best represent the inquiry (i.e., submitter, Test Lead, or SME).

Step 3: DRB Review
 	
All defects with "Open" and "Rejected" statuses will be reviewed during the Defect Triage Meeting led by the DRB, a team consisting of the ITC/QA contractor, the Department, the SI/DH contractor, and the MMIS 2020 Platform module contractors.
 	
The following activities will be performed as part of this step:
• Confirm the defect severity and priority
• Verify the defect is indeed a defect and not a potential MC
• Verify whether the defect is valid or invalid
	If the severity and/or priority need to be updated, the DRB team will make the following update to the Defect Tracking Sheet:
	• Update the appropriate value for "Severity" and/or "Priority". Refer to Appendix A and B.
	• If the DRB determines that the defect will be fixed in the current release, proceed to Step 4
	• If the defect will be fixed in a subsequent release:
	  • Set "Status" = "Deferred"
	  • Update "Notes" with an explanation that the defect will be prioritized for a subsequent release. The CCB process will initiate defect for prioritization and update the status.
	  The process ends after this step.
	
	If the defect is determined to be an MC, the DRB will create an MC Change Request (CR) per the steps outlined in the MMIS 2020 Platform Project Change Management Plan and will make the following updates to the Defect Tracking Sheet:
	• Set "Assigned To" = Submitter's Name
	• Set "Status" = "Rejected"
	• Update "Notes" with the explanation as to why the defect is an MC along with the MC's CR number
	• Proceed with Step 2a
	
	If a defect is determined to be invalid, DRB will make the following updates to the Defect Tracking Sheet:
	• Set "Assigned To" = Submitter's Name
	• Update "Status" = "Rejected"
	• Update "Notes" with the explanation as to why the defect is invalid.
	• Proceed with Step 2a

Step 4: Assign Defect The Development Lead will be a resource either from the SI/DH contractor or MMIS 2020 Platform module contractor.	**The Development Lead will make the following updates to the Tracking Sheet:** • Set "Assigned To" = Developer Name • Update "Status" = "Assigned" If the defect is identified as an issue from the legacy MMIS system after the initial analysis, the defect will be assigned to the legacy contractor.

Step Description	Tracking and Documentation Update
Step 5: Resolve Defect The developer will start working on the fix for the defect.	**The developer will make the following update to the Defect Tracking Sheet:** • Set "Status" = "In Development" **Once completed, the developer will initiate the deployment of the fix to the test environment and will make the following updates to the Defect Tracking Sheet:** • Set "Assigned To" = Submitter Name or Tester Name, the determination of assignee will be based on the test management plan specified for the test level. • Set "Status" = "Ready for Test"
Step 6: Retest/Close Defect The submitter or tester will retest the defect.	**If testing is successful (passed), the submitter or tester will make the following update to the Defect Tracking Sheet:** • Set "Status" = "Closed" • Process ends Submitter or tester will also upload the test results to DocuShare using the Defect Report template. **If testing is unsuccessful (failed), the submitter or tester will make the following updates in the Defect Tracking Sheet:** • Set "Status" = "Reopen" • Set "Assigned to" = Developer Name; for further analysis and resolution • Proceed to Step 5 Submitter or tester will also upload the test results to DocuShare using the Defect Report template.

Table 1. Steps for Managing Non-production Defects during the Development Phase

Defect management roles and responsibilities for each stakeholder vary across testing levels. The subsection "Defect Management by Testing Level" under "Steps to Implement" provides additional information and guidance.

Implementation Phase

The CRM tool for defect management will be used in the Implementation Phase. During this time, some MMIS 2020 Platform modules will also be in Production. Aside from non-production defects mentioned during the Development Phase, production defects will now be identified post-go-live. These defects can be identified from Trouble Tickets (TT) submitted by end users and continuous monitoring activities by the MMIS 2020 Platform module contractors, the SI/DH contractor, the ITC/QA contractor, or the Department.

The following sections provide additional information on how non-production and production defects will be handled.

Non-production Defects

Figure 3 below outlines the steps that are involved in managing non-production defects during the Implementation Phase. With the exception of the use of the CRM tool, this will be similar to the steps during the Development Phase.

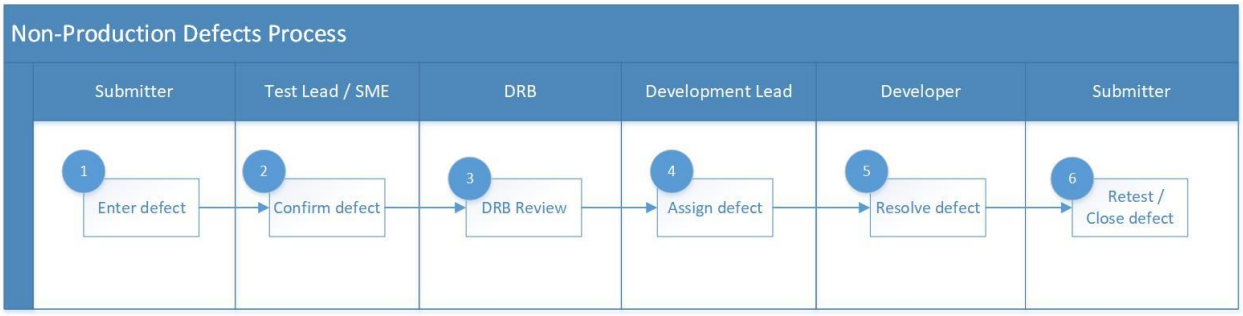

Figure 3. Non-production Defects Process

The following table provides additional step-wise detail on the Defect Management process for non-production defects during the Implementation Phase. This will also be the process once all of the modules are in Production during the M&O phase.

Step Description	Tracking and Documentation Update
Step 1: Enter Defect Submitter enters a defect. The submitter of the defect can be an individual from the ITC/QA contractor, the SI/DH contractor, the MMIS 2020 Platform module contractors, or the Department.	**The submitter creates a new defect in the CRM tool.** • Status of the defect will default to "Submitted" • Set "Assigned To" = Test Lead The Test Lead name is determined as part of test planning for the particular test level being executed. Additional fields will be filled in as per the **Instructions** tab in the Defect Tracking Sheet. **Note:** Subsequent actions to the defect are done in the CRM tool.
Step 2: Confirm Defect The following activities will be performed by the Test Lead: • Verify all details and steps are provided to reproduce the defect • Verify the correct MMIS module name is mentioned • Verify whether the defect is valid or invalid If required, the Test Lead will work with a SME for this review.	**If the defect is determined to be valid, Test Lead will make the following updates to the defect:** • Set "Assigned To" = Development Lead Name • Set "Status" = "Open" • Proceed to Step 3 **If the defect is determined to be invalid**, **Test Lead will make the following updates to the defect:** • Set "Assigned To" = Submitter's Name • Set "Status" = "Rejected" • Update "Notes" with the explanation as to why defect is invalid.

Step Description	Tracking and Documentation Update
	The submitter will review the defect notes added by the Test Lead. Proceed with 2a or 2b depending on submitter review outcome.
Step 2a. Confirm Defect – Submitter agrees to Close The submitter agrees with the rejection of the defect.	**Submitter will make the following updates to the defect:** • Set "Status" = "Closed" • Update the "Notes" acknowledging closure. The process ends after this step.
Step 2b. Confirm Defect – Proceed with DRB The submitter disagrees with the rejection of the defect. The Test Lead, SME, and the submitter will convene for a discussion. If submitter agrees with closure after the discussion, proceed to Step 2a.	**If no consensus is made to close the defect, the following updates are made and process moves to Step 3:** • Set "Status" = "Open" • Submitter updates "Notes" to provide additional information on the submitter, Test Lead, and SME discussion. This can be because clarification is needed on a requirement, or help is needed to determine if a defect should be an enhancement, etc. • "Assigned To" should be set to the most appropriate person who can best represent the inquiry (i.e., submitter, Test Lead, or SME).

Step 3: DRB Review
 	
All defects with "Open" and "Rejected" statuses will be reviewed during the defect triage meeting led by the DRB, a team consisting of the ITC/QA contractor, the Department, the SI/DH contractor, and the MMIS 2020 Platform module contractors.
 	
The following activities will be performed as part of this step:
• Confirm the defect severity and priority
• Verify that the defect is indeed a defect and not an MC
• Verify whether the defect is valid or invalid
	If the severity and/or priority need to be updated, the DRB will make the following update to the defect:
	• Update the appropriate value for "Severity" and/or "Priority". Refer to Appendix A and B.
	• If the DRB determines that the defect will be fixed in the current release, proceed to Step 4
	• If the defect will be fixed in a subsequent release:
	  • Set "Status" = "Deferred"
	  • Update "Notes" with an explanation that the defect will be prioritized for a subsequent release. The CCB process will initiate defect for prioritization and update the status.
	  The process ends after this step.
	
	If the defect is determined to be an MC, the DRB will create a new MC CR per the steps outlined in the MMIS 2020 Platform Project Change Management Plan and will make the following updates to the defect:
	• Set "Assigned To" = Submitter's Name
	• Set "Status" = "Rejected"
	• Update "Notes" with the explanation as to why defect is an MC, along with the MC's CR number
	• Proceed with Step 2a

Step Description	Tracking and Documentation Update
	If the defect is determined to be invalid, DRB will make the following updates to the defect: • Set “Assigned To” = Submitter's Name • Update “Status” = “Rejected” • Update “Notes” with the explanation as to why defect is invalid • Proceed with Step 2a
Step 4: Assign Defect The Development Lead will be a resource either from SI/DH contractor or MMIS 2020 Platform module contractor.	**The Development Lead will make the following updates to the defect:** • Set “Assigned To” = Developer Name • Update “Status” = “Assigned” If the defect is identified as an issue from the legacy MMIS system after the initial analysis, the defect will be assigned to the legacy contractor.
Step 5: Resolve Defect The developer will start working on the fix for the defect.	**The developer will make the following update to the defect:** • Set “Status” = “In Development” **Once completed, the developer will initiate the deployment of the fix to the test environment and will make the following updates to the defect:** • Set “Assigned To” = Submitter Name or Tester Name, the determination of assignee will be based on the test management plan for the test level. • Set “Status” = “Ready for Test”
Step 6: Retest/Close Defect The submitter or tester will retest the defect.	**If testing is successful (passed), the submitter or tester will make the following update to the defect:** • Set “Status” = “Closed” • Process ends **If testing is unsuccessful (failed), the submitter or tester will make the following updates to the defect:** • Set “Status” = “Reopen” • Set “Assigned to” = Developer Name; for further analysis and resolution • Proceed to Step 5

Table 2. Steps for Managing Non-production Defects during Implementation and M&O Phases

Production Defects

Figure 4 shows the end-to-end workflow of the production defects and how they will be logged in the CRM tool and processed through resolution and closure. Production issues will be reported by external users and internal users to the Tier 1 Support Center (TSC). TSC resources will create the TT for the reported issues. If the issue cannot be resolved by the TSC and needs additional research, the TT will be assigned to the appropriate Module Contractor Tier 2 SME. A Tier 2 SME is a resource from either the

SI/DH vendor or the MMIS 2020 Platform module contractor. If the Tier 2 SME identifies the issue as a potential defect, a defect will be entered in the CRM tool. Additionally, if a defect is identified in Production through self-monitoring activities by the ITC/QA contractor, SI/DH contractor, or MMIS 2020 Platform module contractor, it will be entered into the CRM tool.

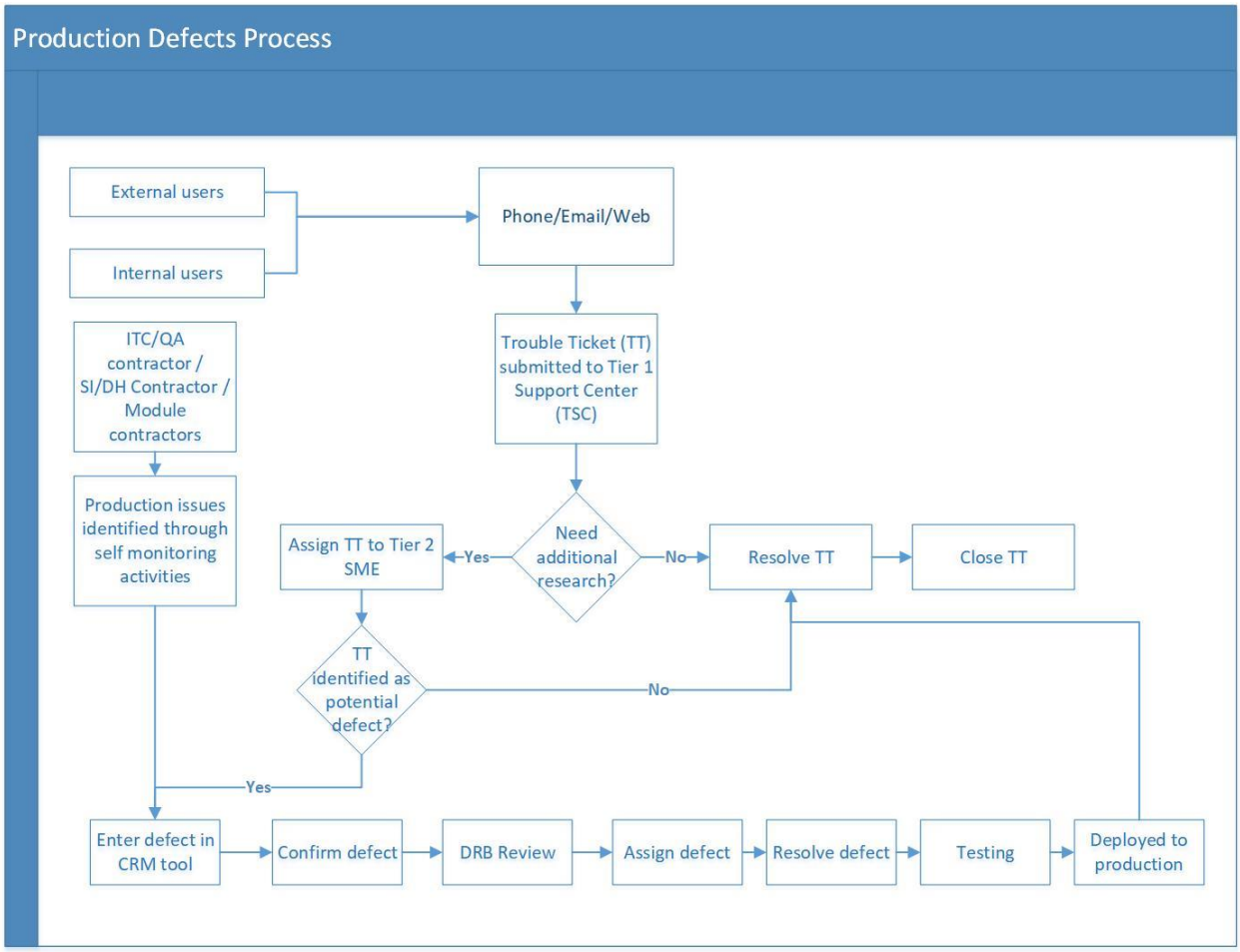

Figure 4. Production Defects Process

Figure 5 below provides additional details on the owners and statuses of each step of the defect management process. These are further detailed out in Table 3.

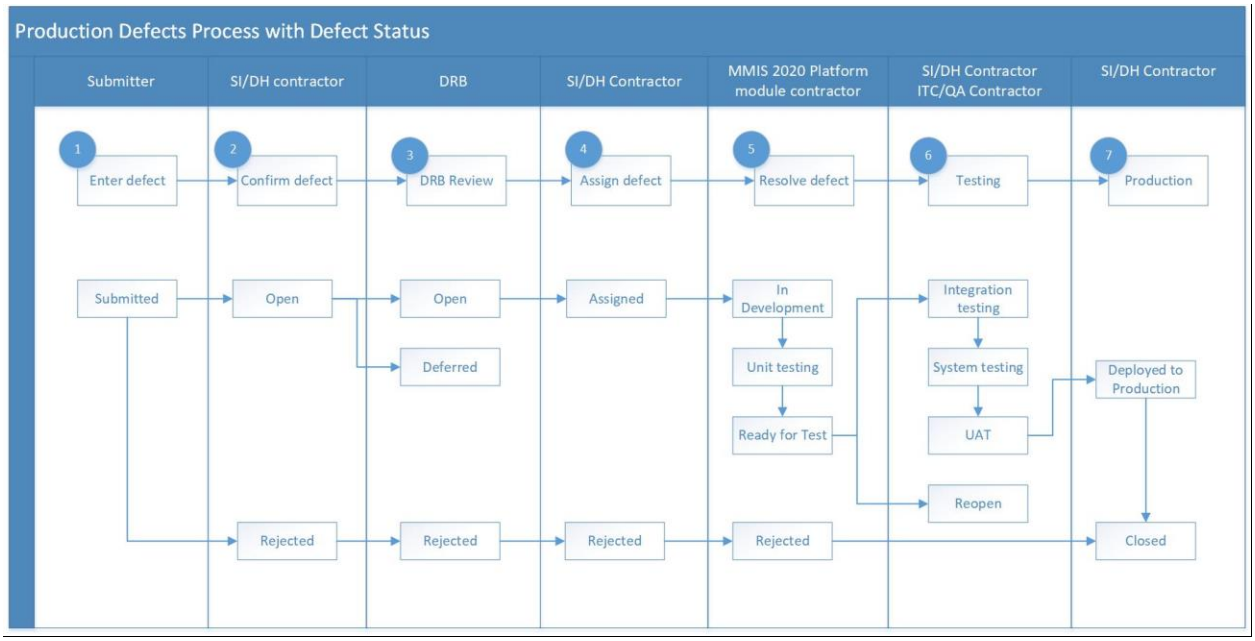

Figure 5. Production Defects Process with Defect Status

The following table provides additional step-wise detail on the defect management process for production defects during the Implementation Phase. This will also be the process once all of the modules are in Production during the M&O phase.

Step Description	Tracking and Documentation Update
Step 1: Enter Defect The submitter can be from the Tier 2 Support Center, an individual from the ITC/QA contractor, the SI/DH contractor, or the MMIS 2020 Platform module contractors. The defect can originate from a production TT or through self-monitoring activities.	**Once a defect is found, submitter will enter a new defect in the CRM tool.** With the exception of the following fields, all other fields to be completed are the same as non-production defects: • Set “Environment” = “Production” • Set “Trouble Ticket #” = TT number from TSC for traceability purposes Note**:** subsequent references to the defect are done in the CRM tool.

Step Description	Tracking and Documentation Update
Step 2: Confirm Defect The SI/DH contractor will review and confirm that all required details are provided. The following activities will be performed as part of this step: • Verify all details and steps are provided to reproduce the defect • Verify the correct MMIS module name is selected • Verify whether the defect is valid or invalid	**If the defect is determined to be valid, the SI/DH contractor will update the defect as follows:** • Set "Assigned To" = SI/DH Contractor • Set "Status" = "Open" • Proceed to Step 3 **If the defect is determined to be invalid, the SI/DH contractor will discuss with the submitter and make the following updates to the defect:** • Set "Assigned To" = Submitter's Name • Set "Status" = "Rejected" • Update "Notes" with an explanation as to why the defect is invalid • Update corresponding TT with explanation The submitter will review the defect notes added by the SI/DH. Proceed with 2a or 2b depending on submitter review outcome.
Step 2a. Confirm Defect – Submitter agrees to Close The submitter agrees with the rejection of the defect.	**Submitter will make the following updates to the defect:** • Set "Status" = "Closed" • Submitter updates the "Notes" acknowledging closure. The process ends after this step. Submitter also closes the TT.
Step 2b. Confirm Defect – Proceed with DRB The submitter disagrees with the rejection of the defect. The SI/DH will initiate a discussion with the submitter. If submitter agrees with closure after the discussion, proceed to Step 2a.	**If no consensus is made to close the defect, the following updates are made and process moves to Step 3:** • Set "Status" = "Open" • SI/DH will update "Notes" to provide additional information on the submitter and SI/DH discussion. This can be because clarification is needed on a requirement, or help is needed to determine if a defect should be an enhancement, etc. "Assigned To" should be set to the most appropriate person who can best represent the inquiry (i.e. submitter or SI/DH).
Step 3: DRB Review All defects with "Open" and "Rejected" statuses will be reviewed during the defect triage meeting led by the DRB, a team consisting of the ITC/QA contractor, the Department, the SI/DH contractor, and the MMIS 2020 Platform	**If the severity and/or priority needs to be updated, the DRB will make the following update to the defect:** • Update the appropriate value for "Severity" and/or "Priority". Refer to Appendix A and B. The DRB will take into account the interoperability of the multiple components of the MMIS 2020 Platform to determine priority and severity. The DRB may determine that a defect should be categorized as a

Step Description	Tracking and Documentation Update

module contractors.
 	
The following activities will be performed as part of this step:
• Confirm the defect severity and priority
• Verify that the defect is indeed a defect and not an MC
• Verify whether the defect is valid or invalid
• Determine the specific module owner
• Determine the testing need for the defect especially when there is cross-module collaboration that needs to be planned
	higher severity or priority rating if it is affecting a higher number of modules.
	• If the DRB determines that the defect will be fixed in the current release, proceed to Step 4
	• If the defect will be fixed in a subsequent release:
	  • Set “Status” = “Deferred”
	  • Update “Notes” with an explanation that the defect will be prioritized for a subsequent release. The CCB process will initiate defect for prioritization and update the status.
	  The process ends after this step.
	
	If the defect is determined to be an MC, the DRB will make the following updates to the defect:
	• Create an MC CR per the steps outlined in the MMIS 2020 Platform Project Change Management Plan
	• Set “Assigned To” = Submitter's Name
	• Set “Status” = “On Hold” pending CCB decision
	• Update “Notes” with the explanation as to why the defect is an MC, along with the MC’s CR number
	• The defect process will end here and pick up at the CCB process. Once the MC is confirmed in the CCB, the defect will be updated to “Rejected” status for closure, and will go to either 2a or 2b, depending on submitter review outcome.
	
	If a defect is determined to be invalid, the DRB will make the following updates to the defect:
	• Set “Assigned To” = Submitter's Name
	• Update “Status” = “Rejected”
	• Update “Notes” with the explanation as to why the defect is invalid
	• Process will go to either 2a or 2b, depending on submitter review outcome.
	
	The TT will also be updated with an explanation as to why the defect is invalid.

Step 4: Assign Defect The Development Lead will be a resource either from the SI/DH contractor or MMIS 2020 Platform module contractor.	**The Development Lead will make the following updates to the defect:** • Set “Assigned To” = Developer Name • Update “Status” = “Assigned” If the defect is identified as an issue from the legacy MMIS system after the initial analysis, the defect will be assigned to the legacy contractor.
Step 5: Resolve Defect	**The developer will make the following update to the defect:** • Set “Status” = “In Development”

Step Description	Tracking and Documentation Update
The developer will start working on the fix for the defect.	**Once development and unit testing is completed, the developer will initiate the deployment of the fix to the test environment and will make the following updates to the defect:** • Set "Assigned To" = Submitter Name • Set "Status" = "Ready for Test"
Step 6: Testing Perform testing for the production defect fix. This will involve multiple testing levels including integration testing, system testing, and UAT. The test plan for each of the testing levels will specify the approach and team members that are needed for validation.	**If testing is successful (passed), the tester will make the following update to the defect:** • Set "Status" = "Testing Completed" **If testing is unsuccessful (failed), the tester will make the following updates to the defect:** • Set "Status" = "Reopen" • Set "Assigned to" = Developer Name; for further analysis and resolution
Step 7: Production The defect fix is deployed to production.	Once the defect is deployed to Production, the SI/DH will make the following updates to the defect and the TT: • Set Defect Status in the CRM tool = "Closed" • Set TT Status in TSC = "Resolved" A notification to the TSC and the submitter is generated, and the TT is closed by the TSC once verified.

Table 3. Steps for Managing Production Defects during Implementation and M&O Phases

Maintenance and Operations (M&O) Phase

Once the last MMIS 2020 Platform module is deployed to Production, the M&O Phase starts. It is expected that both non-production defects and production defects will be identified during this phase. Production defects come from TT submitted by the end users and continuous monitoring activities done by the MMIS 2020 Platform module contractors, the SI/DH contractor, the ITC/QA contractor, or the Department. Non-production defects can come from testing of CRs. If there are any MCs during the M&O Phase, defects may be found during testing. From the process perspective, the non-production defects and production defects will follow the defect management process defined for the Implementation Phase.

Steps to Develop

MMIS 2020 Platform Project CRM Tool Configuration

The SI/DH contractor will provide a CRM tool for defect management. This tool will be used as the common tool for defect identification, tracking, monitoring, and reporting for the MMIS 2020 Platform. The SI/DH contractor, MMIS 2020 Platform module contractors, ITC/QA contractor, and the Department will report and record all defects via the CRM tool. Once the SI/DH contractor is onboarded and the CRM tool is provided, the ITC/QA contractor will work with the SI/DH contractor to provide the configuration of the tool to support the standards and process as defined in the Initial DMP. The following lists the major configuration activities performed on the CRM tool by the SI/DH contractor:

- Configure all MMIS 2020 Platform modules to be selected on the defect entry screen
- Configure the defect severity values matching the values defined in this Initial DMP
- Configure the defect priority values matching the values defined in this Initial DMP
- Define role-based security to enforce, create, read, update, and delete access to defects
- Provide access to appropriate users who will leverage the tool for defect reporting, tracking, or monitoring purposes and set up the access request procedure for any additional users
- Develop defect reports and dashboards in the CRM tool
- Configure the capture of defect classification type
- Configure the capture of defect type (non-production/test or production)
- Enable linking of defects to test cases
- Enable linking of defects to TTs or service requests
- Enable linking of defects to other defects
- Enable the search capability for the users to view the existing defects
- Enable the email functionality to receive email notifications by both the submitter and the assignee whenever the defect status is updated

Defect Management Reporting and Tracking

The ITC/QA contractor will provide defect management reports weekly, which will include defect identification, tracking, and monitoring. These reports will reflect the Department's defect resolution protocol, which includes escalation to the DRB in achieving a necessary resolution. The defect management reports will help manage quality through metrics, which monitor the health and progress of the project. Furthermore, as part of the separate MMIS 2020 Platform Project Quality Management Plan, defect metrics will be implemented, monitored, and reported upon to keep the MMIS 2020 Platform Project stakeholders informed of the quality and compliance of the MMIS 2020 Platform with CMS requirements.

Defect Dashboard

Defect reporting will cover the metrics described in the Defect Metrics section below. Specific defect reports will be designed and implemented as appropriate based on input from the MMIS 2020 Platform Project stakeholders. Figure 6 below shows a sample dashboard to track defects that can be used to monitor the health and progress of the release. A similar dashboard will be created in the CRM tool to monitor defects by severity, priority, testing level, module name, and the stakeholder responsible for the resolution of the defect.

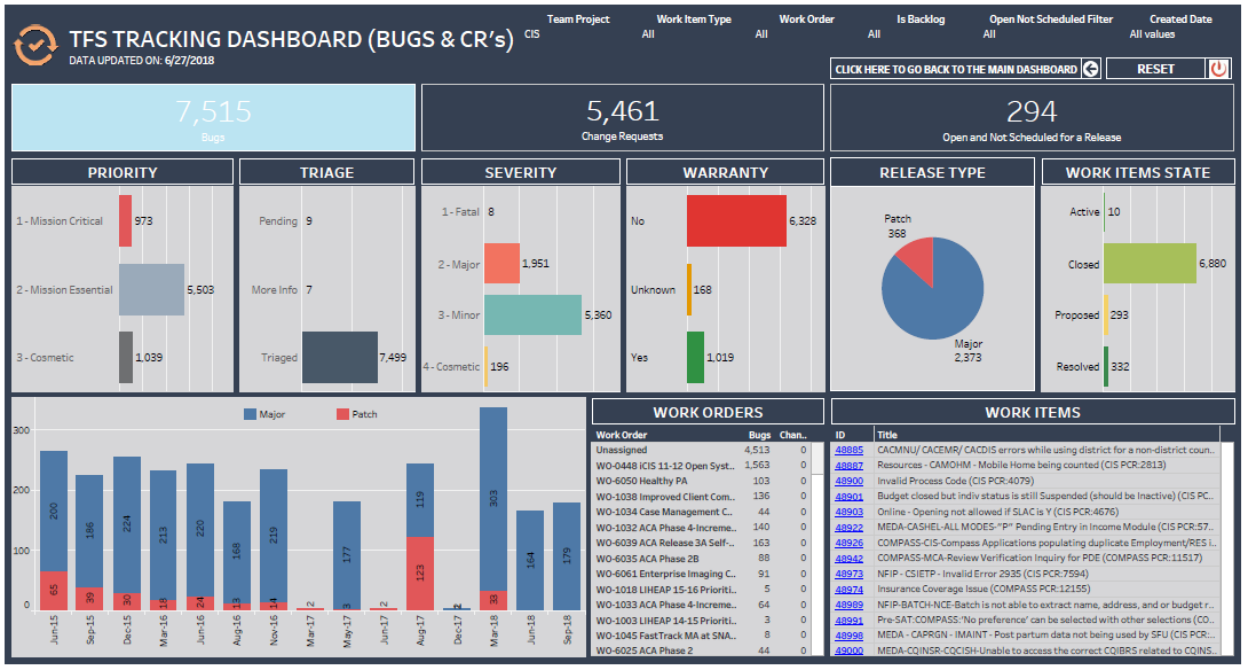

Figure 6. Sample Defect Report

Defect Metrics

The defect reporting metrics listed below may be leveraged in the reports to keep the program informed of the MMIS 2020 Platform's quality and compliance with CMS requirements.

Metric	Description	Algorithm
Cost of Quality	Cost of quality includes the cost of prevention, cost of appraisals, and cost of rework.	Cost of prevention + Cost of appraisals + Cost of rework
Defect Leakage	Percentage of defects that leaked into Production or to the next phase. This is an indicator of testing efficiency. The higher the number, the lower the product quality, and vice versa.	(# of defects found in phase n+1 / # of defects found in phase n + # of defects found in phase n+1) * 100 where n = phase for which defect leakage is being calculated
% Deferred Defects	This is a measure of percentage of defects deferred to the later releases. The higher percentage value indicates a probability that many defects have gone into the Production.	(Total defects open + Total defects deferred) x 100 / Total defects raised
Defect Containment Rate	A metric that measures the effectiveness of formal pre-production testing. This is defined as the percentage of defects found during the test phase in relation to those found after release to Production (~90-day monitoring).	Test defects / (Test defects + production defects)
Defect Density	The number of defects found in a test phase. The purpose of this metric is to judge the effectiveness or quality of test cases.	# of defects / Total # of test steps in all executed test cases
Defect Rejection Ratio	The ratio of the number of defects rejected to the total defects identified for a given milestone/project. It provides a measure for a number of defects rejected during the execution phase, which can be used to gauge tester's efficiency.	(# of defects rejected / # of total defects) * 100
Number of Passed versus Failed Test Cases	A count of the number of test cases that have been executed and the relationship of passed test cases to failed test cases.	# of passed test cases / # of failed test cases

Metric	Description	Algorithm
Requirement Coverage	This metric indicates the percentage of requirements mapped to test scripts against the total number of requirements.	(# of requirements mapped to test cases / Total # of requirements) * 100
Quality Index	This metric signifies the inherent quality of the product in percentage form—higher implies better quality.	Quality Index = [(1 – A) *(1 – B) *(1 – C)] A = (Severity of defects * # of defects) / (Average severity * Total # of test case steps) B = (Severity of defects * # of intermittent defects) / (Average severity * Total # of defects) C = (Severity of defects * # of reopened defects) / (Average severity * Total # of defects)
First Pass Yield	Test case pass/fail rate on first-time execution	# of test cases passed the first time / # Total test cases executed
Test cases Executed versus Planned	This metric indicates the percentage of test cases executed versus planned. This is an indicator of how well the test execution effort progressed as per plan.	(Total test cases executed) x 100 / Total test cases planned

Table 4. Defect Metrics with Description

Steps to Implement

The approach to implementing the MMIS 2020 Platform Project Defect Management Process involves making sure that the all stakeholders have the proper knowledge in dealing with defects during the lifecycle of the project. The ITC/QA contractor will conduct a training on the defect management process. This will be scheduled in coordination with the timeline in the Release Management Plan and the SI/DH and MMIS 2020 Platform module vendor testing plans.

Defect Management by Testing Level

Due to the modular implementation approach and different stakeholders involved at different levels of testing throughout the MMIS 2020 Platform Project, the roles and responsibilities of each stakeholder may be different at each testing level. The defect

management roles and responsibilities for the ITC/QA contractor, SI/DH contractor, and MMIS 2020 Platform module contractors are detailed below.

Test Level	Test Objective and Primary Ownership	Defect Management Responsibility	
		SI/DH Contractor and Platform Module Contractor	ITC/QA Contractor
Unit Testing	Verify the function of a program unit in isolation.	Primarily responsible for defect identification, logging, and resolution for owned modules.	Monitor adherence to defect management process. Generate defect management reports.
Integration Testing	Verify the interactions between the system modules and the DH. Tests are executed as a coordinated effort across MMIS 2020 Platform modules, the DH, and other external systems.	Log defects as testing failures are encountered. The SI/DH contractor is responsible for leading the defect triage meeting and making sure that owners are properly identified for defect resolution.	Monitor adherence to the defect management process. Generate defect management reports.
System Testing	Test downstream and end-to-end module-to-module functionality via the DH, including external interfaces to other applications. Verify functional and nonfunctional requirements such as system security, speed, accuracy, and reliability. Tests are executed as a coordinated effort across MMIS 2020 Platform modules, the DH, and other external systems.	Log defects as testing failures are encountered. The SI/DH contractor is responsible for leading the defect triage meeting and making sure that owners are properly identified for defect resolution.	Monitor adherence to the defect management process. Generate defect management reports.
User Acceptance Testing (UAT)	Final tests prior to the implementation of module or functionality to validate that the system meets the Department's business requirements.	Participate in the defect triage meeting. The SI/DH contractor is responsible for making sure that owners are properly identified for defect resolution.	Log defects as testing failures are encountered. The ITC/QA contractor is responsible for leading the defect triage meeting. Generate defect management reports.

Test Level	Test Objective and Primary Ownership	Defect Management Responsibility	
		SI/DH Contractor and Platform Module Contractor	ITC/QA Contractor
			Note: Defects reported by the Department through their own testing or from UAT results review are also tracked as UAT defects.
Performance, Volume, and Stress Testing	Test system performance with normal load, increased load, and very high load (more than expected), respectively.	Log defects as testing failures are encountered. The SI/DH contractor is responsible for making sure that owners are properly identified for defect resolution.	Monitor adherence to the defect management process. Generate defect management reports.
Installation (Operational Readiness) Testing	Test the operational readiness of MMIS 2020 Platform modules and functionalities planned for a release. Tests are conducted in a pre-Production environment.	Log defects as testing failures are encountered. The SI/DH contractor is responsible for making sure that owners are properly identified for defect resolution.	Monitor adherence to the defect management process. Generate defect management reports.

Table 5. Defect Management by Testing Level

Defect Triage Meeting

Defect triage meetings will occur on a recurring basis through the MMIS 2020 Platform Project lifecycle. Triage meetings are held by the DRB, primarily, but may need other attendees to provide specific expertise depending on the defects being reviewed. The schedule of the triage meeting will be determined based on inputs from the MMIS 2020 Platform Project stakeholders.

Project Phase	Production Defects	During Testing to Triage Non-production Defects
Development	N/A	Daily
Implementation	Weekly	Daily
M&O	Biweekly	Daily

Table 6. Defect Triage Frequency

The typical defect triage meeting agenda includes:

- Review of defects from the earlier test phases or from a previous meeting that require additional dispensation (e.g., clarification, research, decision review resolution, etc.)
- Review of the defects created since the previous meeting

The triage meeting will primarily focus on new defects to confirm the appropriate defect classification type, severity, priority, and steps to reproduce, allowing the SI/DH contractor, MMIS 2020 Platform module contractors, and legacy contractor (when applicable) to resolve defects in an efficient timeframe. Defects that have remained open for longer than the service-level agreement (SLA) or estimated time of arrival (ETA) will be revisited for updates or escalated, if necessary. Once triaged, the defect will follow the remaining steps of the defect management process through to resolution. Additional components of the triage meeting include:

- Triage Decision Review: A triage decision review occurs when the SI/DH contractor or the MMIS 2020 Platform module contractor does not agree with the decision, classification, severity, or priority of a defect from the DRB and requests a review of the decision made in the triage meeting. The DRB will review the supporting information to confirm a decision for moving forward. This may include deferring a defect to a later release or calling for clarification of current requirements to implement the proper solution. If the SI/DH contractor or MMIS 2020 Platform module contractor disagrees with the DRB decision, the topic can be escalated to the appropriate contract management meeting. The project manager and project leadership will review the defect in the contract management meeting to make a final decision.
- Triage – Perform Post-meeting Work: Post-meeting work occurs after the triage meeting concludes. During this subprocess, the ITC/QA contractor distributes the meeting minutes and action items to the group. The meeting minutes should contain a summary of the defects that were triaged and a list of action items for members of the triage group.

Steps to Maintain

The ITC/QA contractor will provide communications and oversight for the ongoing MMIS 2020 Platform Project defect management process. The ITC/QA contractor will monitor the progress of defects until they are resolved with a defined status. As a defect moves through the process, the ITC/QA contractor will produce dashboards and status reports to provide an overall perspective of how many defects are in each step of the defect lifecycle and where each defect is at in the resolution process. Also, the ITC/QA contractor will analyze defects to identify historical trends and areas for improvement, particularly if there are multiple defects related to the same MMIS 2020 Platform module or other Medicaid service areas.

The selected Offeror must deliver the Defect Management Plan and the Initial Defect Management Report within fifteen (15) calendar days after the contract effective date and must update weekly so that the project is on schedule and meets CMS Certification requirements. The Defect Management Plan will be reviewed monthly as part of the Monthly Status Report (see Part III, Section III-9.B of this RFP).

The Initial DMP and Defect Management Report will each be maintained as a "living document" with updates expected throughout the life of the MMIS 2020 Platform Project. Defect management reports will be provided on a weekly basis once a testing phase begins with specific attention to defects impacting CMS certification. See the Defect Management Reporting and Tracking section in the preceding for highlights on defect management reporting and metrics. The Initial DMP will be reviewed monthly as part of the Monthly Status Report.

The selected Offeror and MMIS 2020 Platform contractors will use the MMIS 2020 Platform CRM tool provided by the SI/DH contractor as the common tool to report and track issues and defects. As part of the Defect Management Plan, the selected Offeror will develop standards for defect identification, tracking, monitoring, and reporting for use by the MMIS 2020 Platform module contractors. MMIS 2020 Platform module contractors must report and record defects via the CRM.

See the Steps to Develop section in the preceding for more details on how the CRM tool will be configured and used for defect identification, tracking, monitoring, and reporting by the MMIS 2020 Platform Project team.

The Offeror must describe its approach to the design, development, implementation, and maintenance of the Defect Management Plan and Defect Management Reports.

See Section 2, Approach, for a description of the design, development, implementation, and maintenance approach of the Initial DMP and associated Defect Management Reports.

4. Related Process/Deliverables

The following table lists processes or other contract deliverable documents that interact with, or have a relationship to, the Initial DMP.

Related Processes/ Deliverables	Relationship
Integrated Master Schedule (IMS)	• Includes and tracks defect management tasks
Monthly Status Report	• Initial DMP updates are reported in the Monthly Status Report
Artifact Library	• The current Initial DMP will be stored in the Artifact Library
MMIS 2020 Platform CRM tool	• Repository for defects • Used by the defect management process to track all defects
Release Management Plan	• Defects that are deferred to a future release will need to be included in the release plan of a subsequent release
Communication Plan	• Used to communicate the results of the defect management reports
UAT Plan	• UAT uses the defect management process and CRM tool for defect reporting during test execution; any changes to the Initial DMP may result in updates to the UAT plan

5. MECT Alignment

The following table cites the specific the CMS MECT criteria and how this document supports, or meets, the criteria.

CMS Ref #	Programmatic Review Criteria	How the Plan applies
S&C.MS.15	The state uses an SDLC.	Establishes a framework to manage software quality across stakeholders

6. Roles and Responsibilities

The following table lists roles and responsibilities of various MMIS 2020 Platform contractors required to support activities related to the Initial DMP. The roles are indicated with a letter corresponding to the role, such as R for responsible. The letters used are explained in the following RACI Chart Legend table.

Activity	Department	ITC/QA Contractor	Module Contractors	SI/DH Contractor	IV&V Contractor	*Legacy Contractor
Enter a defect – Unit Testing**	I	C	A	R	I	I
Enter a defect – Integration Testing	I	C	R	A/R	I	I
Enter a defect – System Testing	I	C	A	R	I	I
Enter a defect – UAT	C	A/R	R	R	I	I
Enter a defect – Production	A/R	R	C	C	I	C
Defect triage – Unit Testing*	I	C	A/R	R	I	I
Defect triage – Integration Testing	I	C	R	A/R	I	I
Defect triage – System Testing	C	C	A	R	I	I
Defect triage – UAT	R	A/R	A	A	I	I
Defect triage – Production	A	R	R	R	I	I
Defect resolution – Unit Testing*	I	C	A/R	R	I	I
Defect resolution – Integration Testing	I	C	R	A/R	I	I
Defect resolution – System Testing	C	C	A/R	R	I	A
Defect resolution – UAT	C	A/R	R	R	I	A
Defect resolution – Production	A	R	R	R	I	A
Defect reporting (dashboards and metrics)	C	A/R	I	I	I	I

* The Legacy contractor role will be eliminated when the MMIS 2020 Platform Project enters the M&O phase.

** For unit testing activities, the SI/DH contractor and MMIS Platform module contractors are accountable/responsible only for their respective components/modules.

RACI Chart Legend

The following table defines the letter's meaning used in the table above to indicate level of responsibility for a task.

Term		Definition
R	Responsible	Actively working on completion of activities or goals
A	Accountable	Answerable for the activity or goal not getting completed
C	Consulted	Included in key decisions or activities to garner input and feedback
I	Informed	Notified of decisions or actions made

7. Assumptions and Risks

Assumptions and risks to the MMIS 2020 Platform program that are specific to the Initial DMP are explained within this section.

Assumptions

- All stakeholders will have remote access to the MMIS 2020 Platform CRM tool and will use it.
- The ITC/QA contractor, MMIS 2020 Platform module contractors, the SI/DH contractor, the Department, and the legacy contractor will come to a common agreement to follow the defect management process described in this document.

Risks

- The CRM tool is not available by the time QA/testing activities start. This has been mitigated with a manual process that is included as part of the Initial DMP.
- Lack of adherence to the Initial DMP will result in potential quality issues and delays to the project. For example, defects that are not logged or are missing detail will not be fixed promptly or not fixed at all. To help mitigate this risk, the ITC/QA contractor will work closely with each module contractor during their onboarding to review all defect management processes related to the MMIS 2020 Platform Project, the templates they will use, and their roles and responsibilities. The ITC/QA contractor will also be performing proactive reviews so that the SI/DH and MMIS 2020 Platform module vendors are following defect management processes.

8. Appendices

Appendix A: Defect Severity Definitions

The defect classification “Severity” specifies a subjective rating of a defect on the MMIS 2020 Platform or MMIS 2020 Platform module and refers to the degree of the impact to system functionality. The following values have been defined for defect severity:

Critical

A critical defect in MMIS 2020 Platform Portals or an MMIS 2020 Platform module(s) is unavailable, creating an inoperable state. Users are unable to perform routine job functions that are mission critical. Qualifying condition examples may include:

- Inability to adjudicate claims
- Failure or inability to process a financial cycle(s)
- Failure to provide complete eligibility responses greater than 80 percent of the time
- Any commonwealth-defined mission-critical condition.

Significant

A significant defect in MMIS 2020 Platform Portals or MMIS 2020 Platform module(s) is creating a serious loss of system functionality that requires significant workarounds. Users are partially incapable of completing their normal functions. Qualifying condition examples may include:

- Incorrect claims adjudication
- Limited access to module(s)
- Inability to meet established timeframes for production data imports, exports, and loading
- The issue affects a large group of users with a complicated workaround
- Provider or commonwealth staff unable to access remittance advice reports or 835 files less than three months old

Moderate

A moderate defect in MMIS 2020 Platform Portals or an MMIS 2020 Platform module(s) is creating a limited loss of functionality. Moderate system issues are where workarounds exist but, on the whole, do not affect Production. Qualifying condition examples may include:

- The report is not available but can be generated manually
- The issue affects small subgroup of users with an uncomplicated workaround
- Mouse hover features not triggering text display

Minor

Minor issues have an inconsequential loss of functionality and the impact on users is minimal. The effect on MMIS 2020 Platform system functions is negligible. The issue is essentially cosmetic in nature, such as spelling errors or branding issues. Qualifying condition examples may include:

- Report incorrectly named
- Minor page layout issue
- Help page missing or incomplete

Note: Severity and priority are used in determining the urgency of resolving the defect. Once submitted, subsequent reviews by SMEs, the DRB, and the CCB help determine the appropriate designation.

Appendix B: Defect Priority Definitions

A defect's priority classification specifies a subjective rating of the operational impact of the work item as it affects business users of the MMIS 2020 Platform. Defect priority refers to business operations and addresses the question, "How is the Medicaid business impacted?" Defect priority determines the urgency of defect fix. Priority is the initial driver (with priority 1–4 being worked in order) for prioritization of defects. If the operational impact is high, its priority will be high and should be fixed first. The following values are defined for defect priority:

Priority 1 – Urgent

- Federal or state mandate
- Legal or compliance impact
- Not being able to complete financial or capitation cycles
- Serious consequences to citizens and/or agency mission—major disruption in business operations

Priority 2 – Major

- Impacts user experience or functionality
- Required in order to avoid negative press
- Moderate disruption in business operations

Priority 3 – Minor

- A report is not available to the user but can be generated manually
- Minor operational impact with an uncomplicated workaround available
- Mouse hover features not triggering correct text display

Priority 4 – Cosmetic

- Report incorrectly named
- Minor page layout issue
- Help page missing or incomplete

Note: Severity and priority are used in determining the urgency of resolving the defect. Once submitted, subsequent reviews by SMEs, the DRB, and the CCB help determine the appropriate designation.

Appendix C: Defect Severity and Resolution Timelines

The following two tables list the defect severity and resolution timelines for non-production and production defects.

Non-production defects refer to the defects identified in test environments during unit testing, integration testing, system testing, or user acceptance testing. The resolution timeline refers to the timeframe that the SI/DH contractor or MMIS 2020 Platform module contractor is required to return the defect to the submitter for retesting and verification.

Non-production Defect Resolution Timelines				
Severity Level	**Critical**	**Significant**	**Moderate**	**Minor**
Turnaround Time	1 business day	3 business days	5 business days	7 business days

For non-production defects, turnaround time is defined as the date the defect fix is available for retesting, by the testing team, in the same test environment where the defect was identified. Resolution times for non-production defects are subject to change if the defect is impacting the DDI implementation timeline.

Production defects refer to the defects reported from Production. The production defects resolution timelines refer to the timeframes that the SI/DH contractor or MMIS 2020 Platform module contractor is required to provide the updates/resolutions for each stage of the production defect. These defect severities and resolution timelines will be reviewed with MMIS 2020 Platform Project stakeholders, the SI/DH contractor, and MMIS 2020 Platform module contractors. As additional MMIS 2020 Platform module contractors are onboarded, further reviews may be needed.

Production Defect Resolution Timelines				
Severity Level	**Critical**	**Significant**	**Moderate**	**Minor**
Response Time	15 minutes	1.5 hours	1 calendar day	7 calendar days
Corrective Action Plan (CAP) Due Date*	1.5 hours	3 hours	5 calendar days	30 calendar days
Workaround Time	2 hours	4 hours	10 calendar days	n/a
Final Resolution**	1 calendar day	2 calendar days	30 calendar days	90 calendar days or as mutually agreed upon
Reconciliation Plan***	3 calendar days	7 calendar days	40 calendar days	As mutually agreed upon

*Corrective Action Plan (CAP) Due Date is the date to provide a plan with the timelines for analysis, development, testing, and final deployment date of the fix.
** Final resolution is when the fix is released in Production.
*** Reconciliation Plan is the plan with root-cause analysis of the defect, plan to correct the previously processed transactions due to this issue, and any remediation steps to avoid the specific type of the issue in future.

Appendix D: Defect Classification Types

Defect classification types are utilized to identify the types of defects that are found. The following classification types have been defined for the MMIS 2020 Platform Project:

- **Software Engineering Process (SEP) Defects**. SEP defects refer to errors that relate to the Software Development Life Cycle (SDLC) phase anomalies, design issues, testing flaws, documentation errors, standards in compliance, or missing/flawed requirement definitions.
- **Configuration Defects.** These defects refer to errors related to software or a combination of software products (including Business Rules Engines and Service-Oriented Architecture (SOA) workflows), patches, or upgrades that are installed, administered, configured, or compiled in a manner that results in improper systems operations, introduces vulnerabilities, or degrades systems performance.
- **Application Code Defects**. Code defects refer to software errors that result in or are associated with:
  - Unexpected errors or undesirable results
  - Program control and logic errors
  - System vulnerabilities
  - Interface handling errors
  - DB synchronization anomalies, subroutines, stored procedures, and database errors
  - Data anomalies
  - Memory leaks
  - Error handling
  - Data structures errors.
- **Product Defects.** These defects refer to third-party software product anomalies that can result in improper systems operations, system vulnerabilities, or degradation of systems performance. Some examples of third-party software are the ones used to run the system infrastructure such as the server or desktop Operating Systems (OS), database software, networking software, and security software.
- **Operations Defects.** These defects refer to any defects reported due to user misunderstanding, incorrect use of the software and/or computer systems operational staff error (e.g., scheduling, batch run sequence anomalies, systems clean-up routines, etc.).

- **Interface/Integration Defects.** As part of the integration testing and system testing, the functionalities that are integrated between MMIS 2020 Platform modules will be tested to verify the expected functionality. These defects refer to integration errors between MMIS 2020 Platform modules that do not produce the correct results when integrated with one another.
- **Data Conversion Defects.** These defects refer to errors related to data conversion. If the MMIS 2020 Platform functionality is not working as expected when converted data from the legacy system, it may be classified as data conversion defect. Any data errors identified as part of data loading from the legacy system to EDW of MMIS 2020 Platform are referred to as data conversion defects (e.g., data is not loaded or incorrect data loaded).

As the SI/DH contractor and the MMIS 2020 Platform module contractors are onboarded, the classification types may be revisited to assess modification or expansion of the types.

Appendix E: Initial DMP Toolkit

The screen shots below contain examples of the Defect Tracking Sheet Template and the Defect Report Template. Final electronic documents will be linked in the approved Initial DMP and stored in DocuShare or the Artifact Library, when it is available.

DHS MMIS 2020 Platform Project Defect Tracking Sheet Template

MMIS 2020 Platform Project Defect Tracking Sheet Template

pennsylvania
DEPARTMENT OF HUMAN SERVICES

Application Name	Testing Level	Environment	Defect ID	Headline	Status	Reported By	Assigned To	Severity	Priority	Classification Type	Module Name	Submitter Comments	Developer Comments	DRB Review Comments	Notes

DHS MMIS 2020 Platform Project Defect Report Template

Version 1

pennsylvania
DEPARTMENT OF HUMAN SERVICES
MMIS 2020 Platform Project

Defect Report Template

Defect id:	
Defect Description:	
Module Name	
Test Data:	
Test Case ID:	
Test Environment Name:	
Build:	
Date Reported:	
Reported By:	

Step(s) to reproduce the defect:

Step No.	Step	Test Data	Expected Result(s)	Actual Result(s)
1				
2				

Screen Shots: