| **Control[[1]](#endnote-1)** | **Design Effectiveness[[2]](#endnote-2)** | **Type & Freq.[[3]](#endnote-3)** | **Key Control[[4]](#endnote-4)** | **Test[[5]](#endnote-5)** | **Operational Effectiveness[[6]](#endnote-6)**  (Test Conclusion) | **Report Disposition[[7]](#endnote-7)** |
| --- | --- | --- | --- | --- | --- | --- |
| **Risk A – Capacity Planning** (SO-1)  **Technology infrastructure supporting the SimpleDose application is unable to support increased Patient and Pharmacy data volume.** | | | | | | |
| **A.1 – Capacity Planning**  System storage for SimpleDose has been addressed to ensure the technology infrastructure is scalable enough to support current and future data volumes.  ***Control Owners:***  William (Bill) Mullins, Director, IT Pharmacy Systems  Padmalatha Ajit, Sr. Manager, Application Development | **Partially Effective** | M  P  As Needed | Yes | A.1.1 Obtain evidence of information on what the system storage requirements are and perform testing to determine:  a. The current storage requirement supports current system needs.  b. Testing is performed to support increased Patient Pharmacy data volume. | Effective | No findings or gaps |
| **A.2 – Event Monitoring**  SimpleDose storage is monitored by the Application Team with alerts configured for notifying the Data Base Analysts when threshold limits are met.  ***Control Owners:***  William (Bill) Mullins, Director, IT Pharmacy Systems  Padmalatha Ajit, Sr. Manager, Application Development | **Effective** | A  D  Continuous | Yes | A.2.1 Select a sample of SimpleDose storage events to ensure:  a Thresholds for key performance metrics are configured appropriately.  b. Alerts are being addressed and communicated appropriately to relevant parties. | Effective | No findings or gaps |
| **Risk B – User Access** (SO-2)  **Access to critical system files is not restricted or monitored based on individual job responsibilities.** | | | | | | |
| **B.1 System Access**  Access to critical SimpleDose system files is restricted based on a user’s job responsibility.  ***Control Owners:***  William (Bill) Mullins, Director, IT Pharmacy Systems  Padmalatha Ajit, Sr. Manager, Application Development | **Effective** | M  P  As Needed | Yes | B.1.1 Obtain a system generated list of users with privileged access to critical SDA system files (i.e. CLDs) and perform testing to ensure access is appropriate based on individual’s job responsibility.  Access is appropriate based on individual’s job responsibility. A. Access is appropriate based on server permissions. B. Access is appropriate based on group level permissions. C. Access is appropriate based on owner level permissions. | In-Effective  https://cvshealth.auditboardapp.com/issue-redirect/1400?actionPlanId=1521&title=User%20Access%20Permissions | Based on the test work performed, IA identified developer, middleware, and technical support user accounts with write permissions across 3 production servers selected for sampling.  The following number of users maintain the ability to write data:  RAZ1MPKAPL10V – 144 users  RAZ1MPKDPA1B – 116 users  RAZ1MPKWPL10V – 143 users  Per ATCS-190, development personnel should not have production access. |
| **Risk C – Change Management** (SO-3)  **Changes to the production environment are not reviewed, tested, or approved prior to production implementation.** | | | | | | |
| **C.1 – Approved Changes**  Changes to critical SimpleDose system files are appropriately documented, tested, and approved prior to deployment.  ***Control Owners:***  William (Bill) Mullins, Director, IT Pharmacy Systems  Padmalatha Ajit, Sr. Manager, Application Development | **Effective** | M  P  As Needed | Yes | C.1.1 Please provide all the changes made to SDA between 1/1/2021 to the 5/1/2021: a. Evidence of a ServiceNow change ticket. b. Evidence that changes have been approved. c. Evidence that changes were tested prior to deployment. d. Evidence of the request being made e. Evidence of the request being approved | Effective | No gaps or findings |
| **C.2 – Defect Management**  Identified defects from SDA Phase 1 Major & Minor releases are addressed prior to production.  ***Control Owners:***  William (Bill) Mullins, Director, IT Pharmacy Systems  Padmalatha Ajit, Sr. Manager, Application Development | **Effective** | M  P  As Needed | Yes | C.2.1 Obtain a list of defects related to SDA Phase 1 Releases (Major & Minor) and perform testing to validate that:  a. Defect notification was sent to appropriate individuals.  b. Each defect was addressed by the appropriate team. | Effective | No findings or gaps |
| **C.3 – Vulnerability Management**  SimpleDose Application code is scanned for vulnerabilities prior to being deployed into the production environment. Identified vulnerabilities are addressed in accordance with corporate policy and procedure.  ***Control Owners:***  William (Bill) Mullins, Director, IT Pharmacy Systems  Padmalatha Ajit, Sr. Manager, Application Development | **Effective** | A  D  As Needed | Yes | C.3.1 For SDA Phase 1 Major & Minor releases obtain the security/vulnerability code scans performed and test to ensure:  a. The code is scanned for vulnerabilities using the Checkmarx tool prior to deployment.  b. Vulnerabilities identified are remediated according to the following schedule set forth in corporate policy and procedure  Primary Policy is ATCS-845 Vulnerability Remediation Standard. | Effective | No findings or gaps |
| **Risk D – Data Integrity** (SO-4)  **Data integrity and daily balance controls between the source systems and SDA are not in place and data does not reconcile completely and accurately.** | | | | | | |
| **D.1 – Data Validation Checking**  Member Pharmacy Order Requests are processed appropriately based on validation criteria configured within SDA.  ***Control Owners:***  William (Bill) Mullins, Director, IT Pharmacy Systems  Padmalatha Ajit, Sr. Manager, Application Development | **Effective** | A  P  As Needed | Yes | Obtain examples of member/patient packaging requests during March 2021, which was after the pilot deployment of customers were entered into SDA, to ensure that RxConnect approved the prescriptions.  For a sample of SDA Member Pharmacy Order Requests from March 1, 2021 to March 31, 2021, test to ensure:  A. Validation criteria configured in SDA is met prior to the request being processed | Effective | No findings or gaps |
| **D.2 – Productivity Reports**  SimpleDose Application Team generates Productivity Reports for Supervisors to review and ensure that patient orders are packaged and shipped on schedule. Reports are run daily and consolidated weekly.  ***Control Owners:***  William (Bill) Mullins, Director, IT Pharmacy Systems  Padmalatha Ajit, Sr. Manager, Application Development | **Effective** | M  D  As Needed | Yes | Obtain a sample of Productivity Reports generated from SDA between January 1, 2021 and May 1, 2021 to validate:  a. Reports were generated b. Reports are made available to Supervisors. | Effective | No findings or gaps |
| **Risk E – Application Processing** (SO-5)  **Without a controlled process for running jobs and for altering job schedules, unauthorized programs could be executed that impact patient information and/or the distribution of pharmaceutical products.** | | | | | | |
| **E.1 – Job Scheduling Access**  The ability to create, modify, and delete Job schedules is restricted to authorized personnel.    ***Control Owners:***  William (Bill) Mullins, Director, IT Pharmacy Systems  Padmalatha Ajit, Sr. Manager, Application Development | **Effective** | M  P  As Needed | Yes | E.1.1 Obtain listings of users by name, ID, Job role/title, when access was granted, Manager, direct reports, access/RBAC codes assigned, any privileges with access to add, modify (update), schedule, execute, or delete in-scope job schedulers and perform testing to ascertain:   1. Access is appropriate based on job responsibilities | No testing required as the Job Scheduling process in Prod is managed by the Production Control team and would be out of scope for this audit. | No gaps or findings |
| **E.2 – Job Scheduling Process**  The process of implementing and scheduling SimpleDose Jobs is based on the Batch Run Book.  ***Control Owners:***  William (Bill) Mullins, Director, IT Pharmacy Systems  Padmalatha Ajit, Sr. Manager, Application Development | **Effective** | M  P  As Needed | Yes | E.2.1 Obtain the procedures for SimpleDose IT staff to address Job scheduling.  E.2.2 Obtain the listing of SimpleDose Production Jobs base on the Job scheduler. Select a sample of key Production jobs to compare and confirm:  a. Jobs are documented in the Batch Run Book  b. Jobs are scheduled according to the Batch run book | Effective | No findings or gaps |
| **E.3 – Job Scheduling Notifications**  Application Support Team receives notification for job failures in production (including batch job failures/abends).  ***Control Owners:***  William (Bill) Mullins, Director, IT Pharmacy Systems  Padmalatha Ajit, Sr. Manager, Application Development | **Effective** | A  D  Continuous | Yes | E.3.1 For a sample of SimpleDose job failures in production (including batch job failures/abends) perform testing to ascertain:   1. Application Support team members received MIR3 email notifications. 2. Application Support Team received notification from Operations Support Staff (OSS) for triaged batch job failures/abends, when required. 3. Job failures are addressed according to standards. | Effective | No findings or gaps |
| **Risk F – Application Resiliency** (SO-6)  **Failure to adequately configure, resolve backup failures, and ensure data can be restored could result in the inability to recover significant Retail Pharmacy systems.** | | | | | | |
| **F.1 Data Backup**  SimpleDose data is backed up daily. Backup failures are researched and resolved.    ***Control Owners:***  William (Bill) Mullins, Director, IT Pharmacy Systems  Padmalatha Ajit, Sr. Manager, Application Development | **Effective** | A  P  Daily | Yes | F.1.1 Obtain screenshots from the backup scheduler RMAN supporting the SDA databases and perform testing to ensure:   1. Backup schedules are configured.   F.1.2 This control is fully automated so only one sample is required to validate the back-up process in being adhered to, with a walk thru with the Database Analyst who monitors the backup scheduler in RMAN and its supporting the SDA databases. Perform testing to ensure:   1. Backups were completed according to the schedule. 2. Backup failures were researched and resolved. | Effective | No gaps or findings |
| **F.2 Data Restoration Planning**  In the event of an emergency event or incident, the SimpleDose application and its data would be restored according to plan.  ***Control Owners:***  William (Bill) Mullins, Director, IT Pharmacy Systems  Padmalatha Ajit, Sr. Manager, Application Development | **Effective** | M  P  As Needed | Yes | F.2.1 Obtain the Data Backup and Recovery (DBAR) plan for the SimpleDose application.   1. Validate that the DBAR plan has been reviewed and approved by IT stakeholders. 2. Verify that the Disaster Recovery team scheduled SDA for DBAR testing based on the defined Tier rating on UCMDB. | Effective | No gaps or findings |

|  |  |
| --- | --- |
| **Scope Objective Reference** | |
| SO-1 | Capacity Planning |
| SO-2 | User Access |
| SO-3 | Change Management |
| SO-4 | Data integrity |
| SO-5 | Application Processing |
| SO-6 | Application Resiliency |

1. Be sure the control mitigates the assigned risk and that all controls have all five components of a control (1. person / process; 2. performing a function; 3. frequency; 4. prevents or detects; 5. evidenced). If one of the five is missing, verify with SME that the component is not otherwise addressed. If so, then note the Control Gap (note what component the control is lacking). [↑](#endnote-ref-1)
2. If all five components of a control are addressed and the control mitigates the risk, then it is an "Effective" control. If it does not mitigate the risk, it might be a process. If it does not include all five, this is a control gap and "Control Gap" should be noted. [↑](#endnote-ref-2)
3. A = Automatic Control (performed by a system); M = Manual Control (performed by a person); D = Detective (the control identifies instances of the realized risk after the fact)

   P = Preventative (the control mitigates the risk from occurring); How often is this control performed: Daily (once a day or more); Weekly; Monthly; Quarterly; Annually. [↑](#endnote-ref-3)
4. Key Control: substantially mitigates the risk on its own. Non-Key Control: supports a key control, but cannot wholly mitigate the risk on its own. [↑](#endnote-ref-4)
5. Describe the test steps to determine whether an effectively designed control is operating effectively. Be sure to include the following: 1. Define sample size (usually 25% of population) and testing sample (if possible). 2. Include the specific name of any reports referenced. 3. Verify the test addresses the risk (does it address completeness, accuracy, and / or timeliness). If the control is not effective, note "No testing to be performed due to ineffective control." [↑](#endnote-ref-5)
6. Describe the outcome of the test, clearly stating that the control either Passed or Failed the test. [↑](#endnote-ref-6)
7. Describe the impact the Design Effectiveness and Operational Effectiveness results have on the audit report. List how the findings are included within any reportable issues. If findings were not reportable, explain relationship for the non-reportable disposition. [↑](#endnote-ref-7)