EXPRESS SCRIPTS®

Express Scripts

Business Continuity & Disaster Recovery Program Overview

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Public Information

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Introduction

This document provides an overview of the overall Express Scripts' Business Continuity and Disaster Recovery (BC & DR) programs, including a description of the program's oversight committees, Operational Risk Management, Business Continuity, Disaster Recovery, Crisis Management, Plan Administration and Maintenance, Recovery Strategies, Testing Strategies, Disaster Declaration, Epidemic and/or Pandemic Preparedness.

BUSINESS CONTINUITY (BC) & DISASTER RECOVERY (DR) PROGRAM OVERVIEW

Express Scripts has established comprehensive Business Continuity & Disaster Recovery programs that can quickly and effectively respond to crisis, emergency, or disaster events that have the potential to cause disruptions of normal business operations. The programs provides internal support and oversight that identifies potential impacts that threaten the organization. The programs utilize industry best practices and continue to improve and mature in order to meet the needs of a growing and successful company. The key foundational components of Express Scripts' Business Continuity & Disaster Recovery programs include:

1. Operational Risk Management
2. Business Continuity
3. Disaster Recovery
4. Crisis Management

The Business Continuity (BC) & Disaster Recovery (DR) programs documents the coordination of safety, continuity, and/or recovery responses to disruptions ranging from minor to major. The BC & DR programs focuses on four key areas of recovery:

- People
- Facilities
- Technology
- Operations

The BC & DR programs is strategically designed to:

- Mitigate risk to protect employee safety and welfare
- Mitigate risk to prevent and/or diminish the impact to the business following a disruptive event
- Provide uninterrupted pharmacy benefit services to Express Scripts' members
- Continue to meet obligations to Express Scripts' clients
- Comply with Health Insurance Portability and Accountability Act (HIPAA) regulations
- Comply with the Sarbanes-Oxley act of Congress
- All other compliance and regulatory requirements

The primary emphasis of the programs includes:

- Ensuring employee safety and welfare

- Initiating emergency response
- Providing uninterrupted service to clients and members affected by an incident
- Communication with employees, clients, members and other stakeholders
- Assessment of any damage that impacts the resumption of normal business
- Recovery of business functions and/or technology following a disruptive event

Business Continuity and Disaster Recovery are internal support and service areas that identify potential impacts that threaten the organization. Additionally, the BC and DR teams are responsible for ensuring business continuity and disaster recovery plans are in place and exercised to prevent interruption of critical services, and to re-establish full functionality as swiftly and smoothly as possible.

Business Continuity (BC) Governance

Express Scripts is committed to excellence in helping our customers enhance their health, well-being and sense of security. Such a commitment requires that we be prepared to provide our services and offer our products virtually without fail. Thus, when our ability to provide service is affected, for any reason, we must react in a manner that minimizes the impact, quickly responds to the situation and restore operations as soon as possible. This response will ensure the continued confidence of our customers and shareholders and ensure our position within the competitive marketplace.

Governance Committee

The Governance Committee provides the overarching direction and strategy for Express Scripts Business Continuity program. Meeting cadence is annually and as needed when decisions are required.

Roles and Responsibilities include:

- Provide overall direction of program from an enterprise strategy level, ensuring that risks to the enterprise are appropriately remediated where possible and mitigated where necessary
- Review Critical Process/Application/Site criteria to ensure that the criteria is in line with the overall strategy of the program

Steering Committee

The Steering Committee provides the Business Continuity program support, as necessary, using their positions within the enterprise to accomplish program goals. The Steering Committee would also ensure accountability for program objectives.

Meeting/update cadence is twice annually and individually as needed to ensure that the program is on track to achieve goals set forth by the Governance Committee.

Roles and responsibilities include:

- Provide support on business continuity activities when necessary, leveraging position within the enterprise to identify and facilitate program execution
- Ensure execution of the annual documentation and testing per the Governance committee's direction
- Review testing results to ensure validity and achievement of objectives

Disaster Recovery (DR) Governance

The purpose of the Express Scripts Disaster Recovery (DR) Governance Program is to define the overall organizational accountability and responsibility for the management of the DR Program.

DR Governance Council

A key success factor for the DR Program is the integration and coordination of efforts between the DR team, Business Continuity Team, Technology as a whole and the business to continue to drive success. The mission is to ensure the resiliency of the business function in the event of the loss of a data center (disaster). It also establishes policies, processes and procedures to enable advance preparation and actions by all accountable parties and increase the pace of recovery from disruptions due to the loss of a data center. It seeks to understand the threats and risks from a lack of availability of people, functions, and technology and to reduce the impact of a significant event. Additionally, the council has oversite for the governance framework policy, scope, standards, roles and responsibilities of program team members, RACI (Responsibility, Accountability, Consulted, and informed), reporting mechanisms to track progress of DR activities, and communication protocols to maintain awareness and engagement.

Operational Risk Management (ORM)

ORM performs risk analyses and develops mitigation solutions to allow BC and DR to better manage events that could negatively impact business operations. Risk mitigation is the first line in Express Scripts' defense against unplanned business process disruptions. Additionally, the identification of potential points of failure in business processes is essential. This allows for mitigation and planning to avoid or diminish a disruption to the business.

The Operational Risk Management process includes four main phases:

1. *Identification*: Risks are identified through a series of operational leadership brainstorming sessions as well as through communication with business partners. Cross-functional teams are identified to work on mitigation strategies.

2. *Planning*: Risk mitigation strategies are prioritized, defined and planned by the cross-functional teams using Project Management Office (PMO) methodology.

3. *Execution*: Risk mitigation plans and strategies are implemented. Detailed plans are executed. Project Team reviews are held frequently. Program dashboard reviews are held with the appropriate governance committee(s) and leadership stakeholders.

4. *Exercise*: Mitigation plans and results are "exercised" to ensure the risk is mitigated. Results are validated with the Operational areas. The Business Continuity Steering Committee provides final approval of the risk mitigation process. Results and processes are communicated to the appropriate Operational areas.

Business Continuity (BC) Planning

The goal of Business Continuity Planning is to ensure all necessary steps are taken to identify the impact of potential losses from business disruptions, validate recovery strategies, document business recovery plans and ensure continuity services through plan testing and maintenance.

The Business Impact Analysis (BIA) identifies the financial and operational exposures, for each critical business process. This drives and supports the establishment of a target Recovery Time Objective (RTO) for each critical process or group of related processes. Business Continuity Planning ensures that critical business processes resume operations within a specific time frame should an incident occur that impacts business operations.

The Business Continuity Planning effort is organized into five phases. These phases are followed to ensure the program meets requirements to continue/recover critical business processes.

Phase 1: Business Impact Analysis – Perform Business Impact Analysis (BIA) for identification of critical business processes and Recovery Time Objectives.

Phase 2: Recovery Strategy Development – Recovery strategies for continuation of critical processes are developed using a variety of alternatives that are described in the Recovery Strategy section of this document.

Phase 3: Plan Development - Business Recovery Plans, Technical Recovery Plans and Executive and Emergency Response Management Plans are developed for safety of employees, protection of company assets, and continuity of critical business processes.

Phase 4: Plan Testing – Scheduled testing and exercising of recovery and response plans ensure plan accuracy and feasibility. Testing ensures that plans and recovery strategies support Express Scripts' testing methodology. Critical business functions are tested annually.

Phase 5: Plan Implementation/Education - A plan maintenance schedule is developed for new plans. Sessions with leadership and employees are scheduled and conducted to promote awareness to emergency procedures and continuity/recovery plans.

Disaster Recovery (DR) Planning

Express Scripts has a formal Disaster Recovery (DR) Planning program to respond to a catastrophic event impacting a production data center. The DR plan identifies steps to stabilize and restore the organization's critical systems and technical environment. The plan addresses recovery of critical Technology facilities, Technology systems, applications, supporting security software and telephony systems. The DR plan defines the resources, actions, tasks, equipment and data required to manage the technology recovery effort. DR Planning is a component of the overall Business Continuity Contingency Plan that describes how to recover and restore technology to operation if it is interrupted or destroyed by a disastrous event. This includes:

- Technology systems and applications
- Telephone systems and features
- Telecommunications connectivity
- Data center availability

Express Scripts continues to move to a consolidated architecture of a primary and secondary data center strategy. Data center locations are geographically disbursed to provide physical separation, continual application access, and critical data availability.

System and Application Data — The process for data backups includes:

- Full or incremental backups of member information, client and relevant data are performed daily, along with disk replication and virtual tape replication between the production data center and secondary recovery data center sites. Multiple generations of data backups are retained to minimize data lost in the event of a disaster.

- Production servers, with the use of backup data, are fully recoverable.
- Backups are reported on and audited allowing for any exceptions to be identified and corrected.
- System and database files are replicated to the secondary recovery site, ensuring security and recoverability of the data if needed for recovery.

Network — Network architecture is designed so that entire portions of the system could be shut down without impact to production. Express Scripts, Verizon or AT&T can re-route traffic to maintain connectivity. Internet feeds are provided by multiple carriers, and sites are connected through redundant network links.

Retail Claims Adjudication – The claims adjudication system combines data sharing and parallel computing with system clustering to share the claims workload for high performance and high availability. Recovery of claims adjudication is tested annually to ensure recovery requirements, including the Recovery Time Objective, and procedures remain current and valid.

Crisis Management

Express Scripts has a formal, approved Crisis Management Plan that contains defined incident identification, declaration, triage, and escalation procedures. The Crisis Management Team consists of Executive Leadership, key business leaders, and individuals from:

- Corporate Communications
- Corporate Procurement
- Corporate Real Estate
- Compliance
- Human Resources
- Information Technology
- Legal
- Pharmacy Practice
- Public Affairs
- Sales & Account Management
- Security and Safety
- Senior Leadership
- Service Delivery
- Site Leadership (Local Crisis Response Teams)

On a daily basis, the Business Continuity Team monitors weather and events (i.e., hurricanes, wildfires, delivery disruptions, etc.) that could interrupt critical business processes and/or impact clients, members, employees or facilities. Depending on the event and the potential impact, the Business Continuity Team follows the appropriate Crisis Management procedures and engages Crisis and Operational response teams to manage the event to closure.

Crisis Management playbooks are created for major events that may impact the company, members, clients or stakeholders and are stored in a library for future crisis events. The playbooks quickly and effectively identify tasks to coordinate and execute recovery efforts during a crisis situation.

Crisis Management checklists are reviewed and revised on a scheduled basis. Lessons learned are documented after events and playbooks are revised accordingly.

Crisis Communication Flow

- Corporate Communications: Determines level of information to be distributed and develops communication for leadership and employees.
- Communications to Patients, Retail Pharmacies, and Clients will be developed in collaboration with Corporate Communications and Legal.
  - *Patient*: IT Vendor Operations; Web Communication; Patient Advocacy Communication; Client & Patient Systems
  - *Retail Pharmacy*: Trade Relations & Pharma will perform outreach
  - *Client*: Sales & Account Management will perform outreach
- Communication to Media and Stockholders will be developed by Corporate Communication & Legal teams
  - Media and stockholder communications will be managed by Public Affairs/Issues Management
- Vendor Communication will be managed in collaboration with Corp. Communication, Legal & Trade Relations, & Pharma
  - Service Delivery & Site Ops will coordinate with drug vendors
  - Corporate procurement will coordinate with Shipping Vendors
  - Collaboration with Corporate Procurement, Service Delivery & Site Ops and IT Vendor Management will be ongoing.

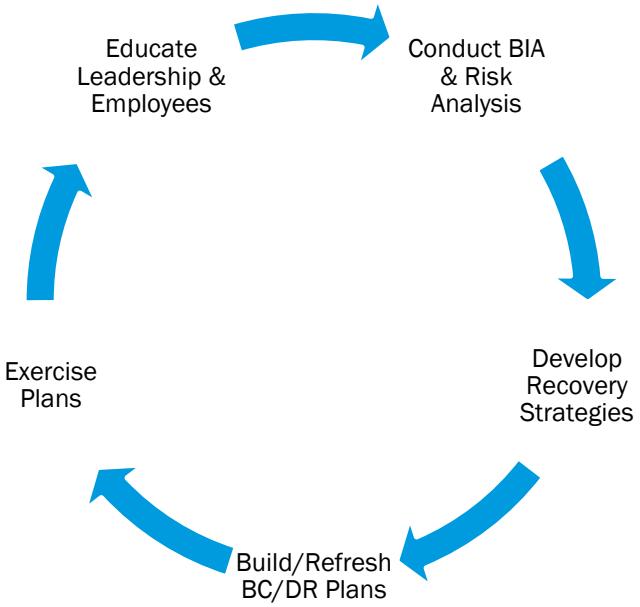
PLAN DEVELOPMENT AND MAINTENANCE

Formal Business Continuity and Disaster Recovery Plans provide viable recovery tasks that are appropriate for re-establishing normal production operations after a disruption.

Business Continuity and Disaster Recovery teams manage and maintain the Business Continuity and Disaster Recovery Plans. The plans are created and stored on geographically dispersed servers.

Business processes change periodically requiring a scheduled review, update, and exercise of current plans. This process validates that Express Scripts maintains a viable recovery capability.

Business Continuity and Disaster Recovery planning uses a defined process shown in the following diagram.



- Plans for operational functions are reviewed and updated annually or as changes become known.
- A test or exercise post-mortem is held where the team identifies any issues or gaps and lessons learned. Open issues and gaps are tracked until resolution. The plans are updated as appropriate.

RECOVERY STRATEGIES

A Business Impact Analysis (BIA) is completed by business owners to identify their business processes and dependencies on Technology. The BIA also identifies the Recovery Time Objective (RTO) for the business processes and Technology resources. The RTO is the acceptable time required to recover a process or application following an interruption.

Business recovery strategies include: workload shifting, recovery at alternate sites (Express Scripts internal or vendor contracted), contracted mobile solutions, work from home, overtime, flex staffing, cross-training, engaging support staff into daily operations, and third party vendor engagement.

Recovery strategies applied to Technology systems or applications are based on the Business Impact Analysis (BIA) ranking as identified by Express Scripts Business Operations. Express Scripts' Technology systems and applications are comprised of various interdependent applications, data, and underlying hardware.

The RTO of an application determine the approach and technologies available for a successful recovery in the event of a disaster. Following are the available recovery strategies for recovering hardware capacity in the event of a disaster.

Pharmacy Operations/Home Delivery Distribution — Express Scripts' home delivery pharmacies provide complete back-up/contingency and redundant capabilities in the event of a disaster at any pharmacy site. Order routing capabilities allow the dispensing of medication at an alternate pharmacy in the national network. In the event of a failure at one home delivery pharmacy, prescription information is easily routed to other pharmacies for fulfillment without significant processing interruption. Express Scripts' dispensing

process allows automatic sorting and isolation of packages by destination zip code or shipping carrier, facilitating alternate delivery methods. Express Scripts' maintains relationships with several shipping carriers, reducing shipping carrier failures. The shipping carriers work closely with Express Scripts during a natural disaster such as a hurricane, flood and wildfire to determine alternate delivery or pick-up locations, minimizing delivery disruptions.

Call Center Customer Service Operations — In the event of a disruption at a Call Center, calls can be readily routed to an alternative site. Call routing assures uninterrupted service to members in the event of a disaster at a site.

Hardware Disaster Recovery (DR) Strategies

The secondary data center is geographically separate from the production data center. Various recovery strategies are used to maintain the hardware, data storage and applications at the site. Recovery strategies are designed to meet the BIA requirements. Dedicated and identified hardware and storage are maintained at the recovery site using different methods.

- **Hot standby** - requires a designated DR server. A Hot Standby server is identified, running and has a fully functional host/OS instance. It is available at the secondary recovery data center and is capable of scaling to meet DR processing needs. This strategy involves matching production hardware capacity at the recovery data center and configuring it to match the production environment.

- **Replication virtual servers** – leverages disk-level replication from the primary data center to storage in the secondary data center. Upon disaster, these production replicas are activated using local compute capacity.

- **Cold standby** - requires restore of the operating system (OS), applications, databases and data. In the event of a disaster, a server is (re)built from a backup of the production system.

Data and/or Application Disaster Recovery (DR) Strategies

Application recovery strategies are coupled with one or more data recovery solutions. The strategies for recovering the data stored within a database or on a file system are dependent on the RTO and RPO.

- **Code deployment** for production application code on a Hot Standby server or a co-located server is maintained in parallel with production code. With code deployment, the application is not started until the disaster is declared. When a disaster is declared, the data recovery is completed, the recovery application instance is started and client service is re-pointed to the application in the disaster recovery environment.

- **Initialized Code deployment** eliminates the step of starting the DR applications before recovery is available. In this case, a client service is re-pointed to the recovery application instance and processing can proceed. The code is maintained in parallel with production.

- **Asynchronous (Async) Replication** is a configurable replication of changed blocks based upon time intervals. Data changed on the production disk is updated via the storage infrastructure on the recovery disk within a specific time frame, typically seconds or minutes. Replication is performed at the storage level utilizing EMC or IBM products.

- **Batch Copy** involves a scheduled push of changed data via logs, blocks, etc. Changes made to production storage are copied to the recovery storage unit by the operating system or application level scripts and processes.

- **VTL (virtual tape library) Recovery** is the restoration of data from virtual tape. Production data is backed up to separate disks, typically daily, and the backups are pushed to the recovery storage at the recovery site. In the event of a disaster, the recovery system is restored from the backups, application is started and processing can resume.

TESTING STRATEGIES

Express Scripts has developed a testing methodology and employs a range of testing strategies to validate recovery strategies and ensure plan validity.

Critical operational business areas and associated technology solutions are exercised annually. Express Scripts contracts with third party vendors that provide operational site recovery and technology solutions. This ensures that production processes and technology at both Express Scripts and the vendor sites remain compatible. Internal Express Scripts recovery sites are also tested to validate recovery strategies and ensure that recovery time objectives are met.

During the exercises, issues and gaps are identified and either mitigated or tracked for remediation to ensure preparedness and Continuity for Express Scripts. Any situation that deviates from the documented plan is either addressed during the exercise or it is tracked for remediation.

Test category selection includes the consideration of whether the business and/or technical processes are new, static, or recently modified. Categories of testing are outlined in the table below:

Exercise Type	Primary Participants	Definition
Walkthrough	BC/DR Plan Owner(s), SMEs, Technical Product Owners (TPO)	Validate components of documented BC/DR Plans
Tabletop	BC/DR Plan Owner(s), Supporting Area Alignments	Discuss simulation of implementing documented BC/DR Plans & Staff Preparedness for crisis events
Work Area Recovery (WAR)	BC Plan Owner(s), Supporting Area Alignments	Recover from documented BC/DR Plans & Staff Preparedness
DR Exercise	DR Plan Owner(s), Technology Recovery Teams, TPO	Validate components of documented DR Plans by executing recovery testing of applications / components
Crisis Response	Local and Corporate Crisis Response Teams	Validate components of documented Crisis Response Playbook

DISASTER DECLARATION

Each Express Scripts site has plans and processes for Business Continuity, Emergency Response (managed by Security and Safety), and Site Readiness (which include Local Crisis Response Teams). Each Local Crisis Response Team's members consists of the site leadership, with representatives from Security, Safety, Human Resources (HR), Corporate Real Estate (CRE), Technology, and BC. Each site's Business Continuity Plan contains internal management escalation and notification procedures.

Upon notification of a business disruption, the Site Leadership and Corporate Crisis Response Team Leaders request a damage assessment of the situation. The report can be in written or verbal form, depending on the circumstances and required timeliness of the emergency response. The Corporate Crisis Response Leaders analyze the report to determine the necessity for a disaster declaration. The Crisis Response Team is authorized to make a recommendation to declare a disaster. The BC Team secures appropriate executive approval, facilitates the coordination of recovery activities and implements the appropriate Business Continuity Plans and/or Disaster Recovery Plans.

Client notification will be coordinated by members of Sales and Account Management and Corporate Communications. Patients are informed of a delivery or dispensing disruption or other similar circumstance. Contact may be via internal communications services as Patient Care Contact Centers or Customer Service, outbound calling systems, email, postal letters and doctor notification. Members are offered alternate fulfillment methods, including the services of local pharmacies.

Business Continuity facilitates recovery efforts until the restoration of normal operations has been realized.

The Crisis Response Team will contact appropriate senior leadership, authorized to declare a site disaster on behalf of Express Scripts. Individuals authorized to declare a technology or site disaster on behalf of Express Scripts, include:

- Vice President and Deputy Chief Information Officer
- Vice President and Chief Information Security Officer-Information Protection
- Senior Director, Global Business Continuity Officer
- Member Experience, Vice President and General Manager
- Accredo Operations, Vice President and General Manager
- CuraScript Specialty Distribution, President
- Pharmacy Operations, Vice President
- Pharmacy Fulfillment, Vice President and General Manager
- PBM Services/Client Services, Vice President and General Manager

EPIDEMIC AND/OR PANDEMIC PREPAREDNESS

Express Scripts has a pandemic plan that documents the strategy used to minimize the impact of an epidemic or pandemic outbreak that may impact the ability to provide core business operations. Business Continuity, in conjunction with Human Resources, Corporate Real Estate and Corporate Security and Safety leads the company's efforts to ensure that crisis management, and continuity plans are in place to support key business operations during an epidemic and/or pandemic.

Express Scripts monitors the World Health Organization's (WHO) Epidemic and Pandemic Alert and Response operations, the Centers for Disease Control (CDC), Federal Emergency Management Agency (FEMA) and other

sources as appropriate to ensure that up-to-the-minute communications regarding the worldwide status of epidemic or pandemics are available.

Express Scripts' Crisis Management Team is tasked with overall event coordination as identified during the crisis management process.

The following key points are outlined in the Pandemic BC preparedness plan:

- Personal hygiene recommendations, enhanced workplace cleanliness, development of policies on social distancing (e.g., minimizing face-to-face meetings)
- Potential expansion of "work at home" capabilities
- Leadership succession
- Plan for a large scale absence in the workforce