Crisis to Continuity: *CHOP Revenue Cycle's Cyber Playbook*

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Background

The healthcare industry is increasingly targeted by cyber threats, with significant disruptions to operations and risks to Protected Health Information (PHI)[2,3]. In February 2024, Change Healthcare experienced a ransomware attack with industry-wide implications, including impacts on critical CHOP applications such as InterQual and its claims processing systems.

Objective

The objective of CHOP's Revenue Cycle Cyber Readiness Response Task Force was to ensure financial and operational stability during industry-wide cyber threats. This initiative aligned with CHOP's commitment to safeguarding financial processes while ensuring patient care continuity, minimizing disruptions even under the most challenging circumstances.

Planning and Implementation Methods

CHOP conducted a rapid revenue cycle analysis during cyber events, collaborating with IT and vendors to assess system impacts. A three-day claims audit was launched to measure disruption.

2 Days
To Develop Specialized Reporting Tools

2 Groups
Payers Categorized into Impacted and Clean

29 Payers
Impacted

$250M
In Claims Held at Its Peak

This 4-month response, guided by our **Emergency Preparedness Framework**, required coordination across IT, clinical operations, and external partners, impacting thousands of claims across multiple payers.

Results

The incident highlighted the need for a pre-established cyber response framework and emphasized the value of continuous process improvement.
Key outcomes included:

Scenario Analysis: Leadership identified response gaps, leading to the creation of a Cyber Readiness Response Task Force under CHOP's Emergency Preparedness Framework.

Capability Enhancement: Enhanced workflows and reporting for greater flexibility in payer and vendor management. Strengthened collaboration with clinical teams and DTS for faster issue resolution.

Clinical Collaborations			
Labs	Pharmacy	Surgery	ED
Blood Bank	Home Care	Radiology	Cardiac Cath
PT/OT	Cardiac OR	Primary Care	Ancillary Services

Flexibility in Operations: Implemented advanced payment options, negotiated flexible payer limits, and developed adaptable workflows to address evolving challenges. Integrated four tabletop exercises to enhance staff preparedness.

Advanced Planning: Prioritized actions within the first 48 hours to 30 days, ensuring swift operational recovery for billing and claims processing.

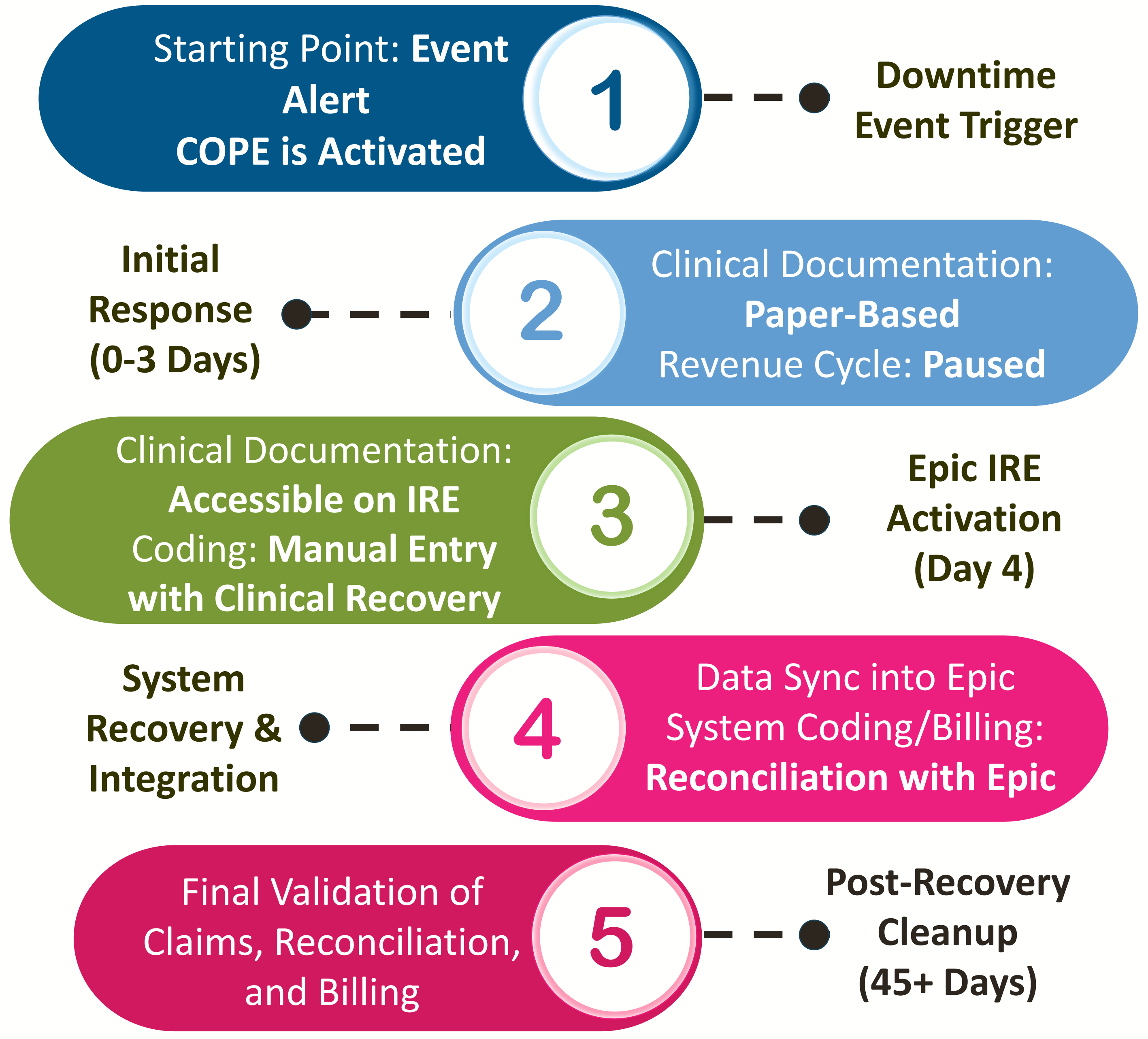
Revenue Cycle Response Framework (in days)

Teams	0-3	4-14	14-30	31-45	46-180	180+
Charge Capture (Clinical Teams), HIM Medical Records, Utilization Management	Activate Downtime: Begin Manual Process					
HIM-Coding and HIM-Patient Identity/Chart Completion, CHOPPA-Coding and Revenue Integrity	Staff Redeploy	Activate Downtime				
HIM-Release of Information, Payment Integrity, Collections, Credits, Payment Posting	Staff Redeploy					
CDI (0-30 days - location based redeployment)	Staff Redeploy			Activate Downtime		
Billing	Staff Redeploy				Activate Downtime	
Vendor Collections	Staff Redeploy	Activate Downtime				

Conclusion

CHOP applied lessons learned into a **continuous improvement framework**, enhancing preparedness for emerging threats. The new **Business Continuity framework** takes a proactive approach, addressing vulnerabilities—including but not limited to cyber threats—while strengthening response capabilities. This ensures resilience remains a foundational pillar of CHOP's operational strategy.

Technology Integration: Utilizing **CHOP's Office 365 Platform for Emergencies** (COPE) and the **Epic Isolated Recovery Environment** (IRE) for enhanced system protection and rapid recovery.



Starting Point: **Event Alert**
COPE is Activated
1
Downtime Event Trigger

Initial Response (0-3 Days)
2
Clinical Documentation: **Paper-Based**
Revenue Cycle: **Paused**

Clinical Documentation: **Accessible on IRE**
Coding: **Manual Entry with Clinical Recovery**
3
Epic IRE Activation (Day 4)

System Recovery & Integration
4
Data Sync into Epic
System Coding/Billing: **Reconciliation with Epic**

Final Validation of Claims, Reconciliation, and Billing
5
Post-Recovery Cleanup (45+ Days)

This coordinated approach ensures CHOP's Revenue Cycle remains resilient and adaptable, safeguarding patient care continuity and organizational integrity during any future cyber threats.