

## Continuity 101

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Managing Partner  
Wakefield Brunswick, Inc.



## Continuity 101

Angela Devlen  
October 15, 2012






# Healthcare Continuity Planning

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What Is It?



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**“Preparedness is not solely about planning for the next sudden influx of patients but also about being prepared for events that impact IT systems, the physical plant, clinical and business operations. Business Continuity allows hospitals to more effectively achieve this.”**

### Emergency Management

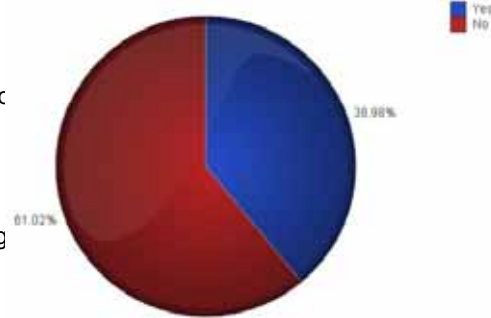
An integrated approach to the management of emergency programs and activities for all four emergency phases (mitigation, preparedness, response, and recovery), for all types of emergencies and disasters

### Continuity of Operations (COOP)

Maintaining continuity of healthcare delivery by sustaining or reestablishing functional capabilities during and after an all hazards incident

### Business Continuity

An integrated set of plans, procedures and resources that may be used to maintain and recover essential functions impacted from any event causing an interruption of healthcare delivery services



Source: BC Management Healthcare Provider 2011 Business Continuity Program Management Industry Benchmarking Report



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Loss of IT



Loss of Facility/Physical Plant



Interruption to Clinical and Business Operations

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## Loss of IT



## Loss of Facility/Physical Plant



## Interruption to Clinical and Business Operations

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2009: The New England Journal of Medicine, estimates only 17% of office-based physicians are using some sort of EHR and 9% of hospitals use electronic health records.

2011: Four-fifths of the nation's hospitals and 41% of office-based physicians intend to take advantage of federal incentive payments for adoption and meaningful use of certified electronic health records (EHR) technology, according to survey data released today by the Office of the National Coordinator for Health Information Technology (ONC).

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**“..the most significant technological threat to patient safety the VA has ever had.”**

**“The disruption severely interfered with our normal operation, particularly with inpatient and outpatient care and pharmacy.”**

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**Loss of IT**



Loss of Facility/Physical Plant



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Loss of IT



Loss of Facility/Physical Plant

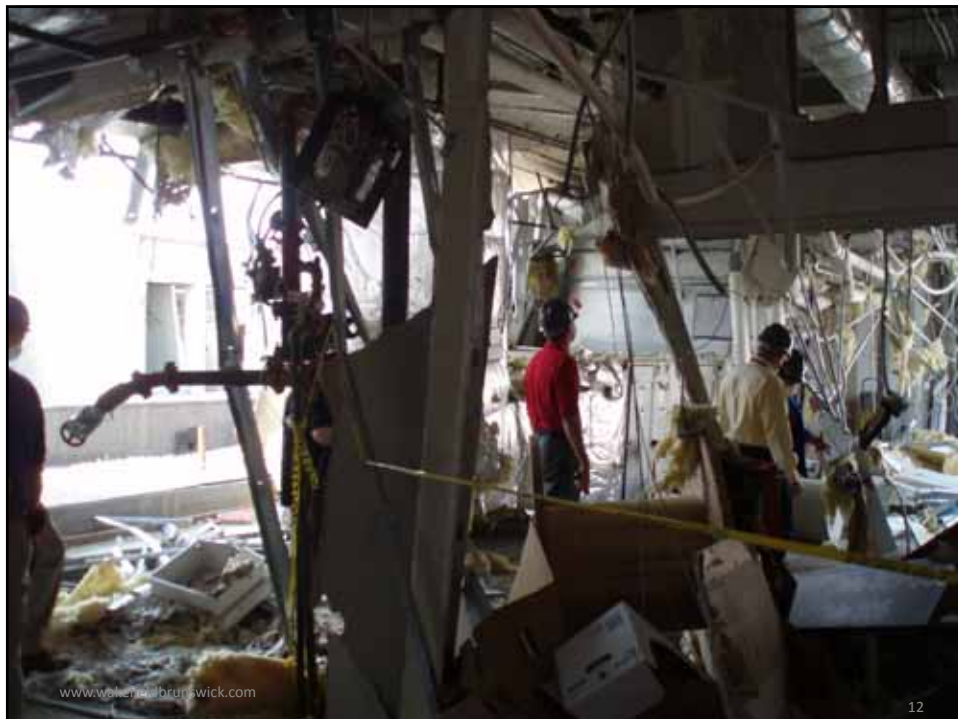


Interruption to Clinical and Business Operations

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Loss of IT



Loss of Facility/Physical Plant



Interruption to Clinical and Business Operations



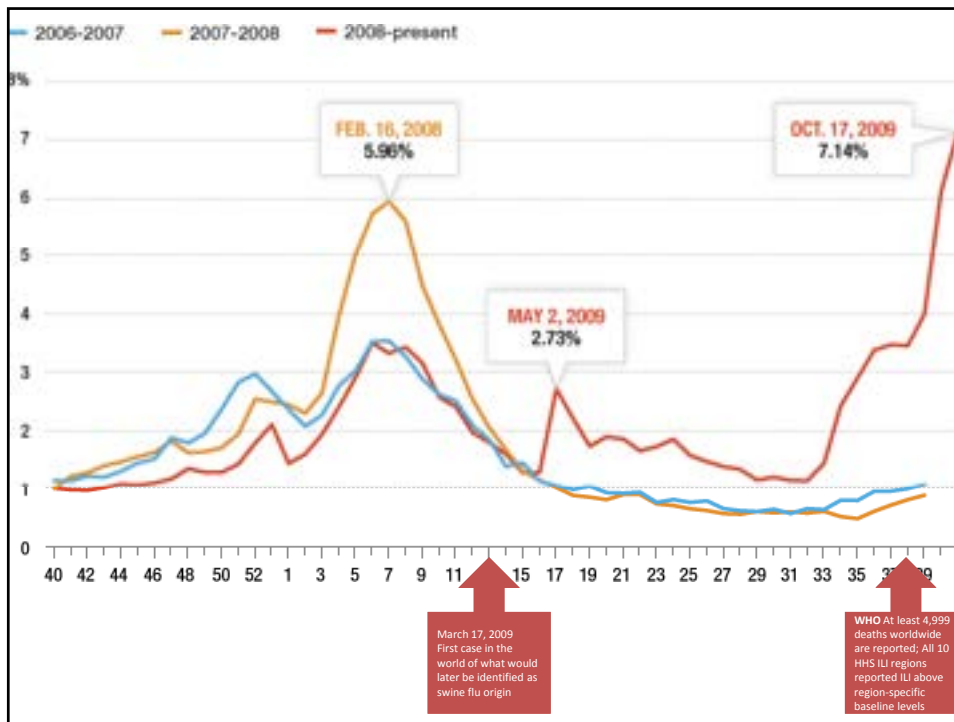
Loss of IT



Loss of Facility/Physical Plant



Interruption to Clinical and Business Operations



## The Three Paradigms of Business Continuity

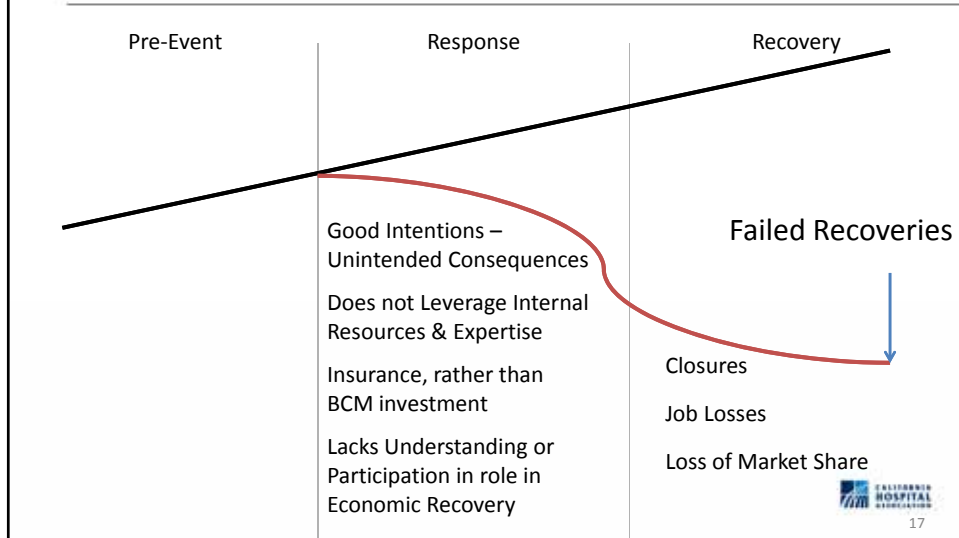
One Size Fits All Paradigm: Reactive Model

Compliance-Based Paradigm: Adequacy Model

Integrated Paradigm: Resiliency Model



## One Size Fits All Paradigm: Reactive Model



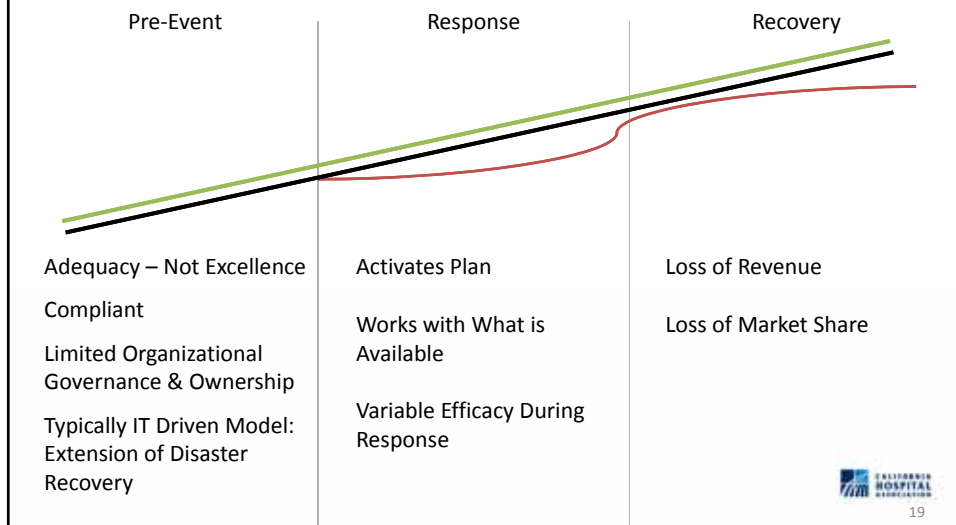
The average time period (days) to restore to normal operations is 45 days

Source: BC Management BCM ROI Report and Event Impact Management Report.



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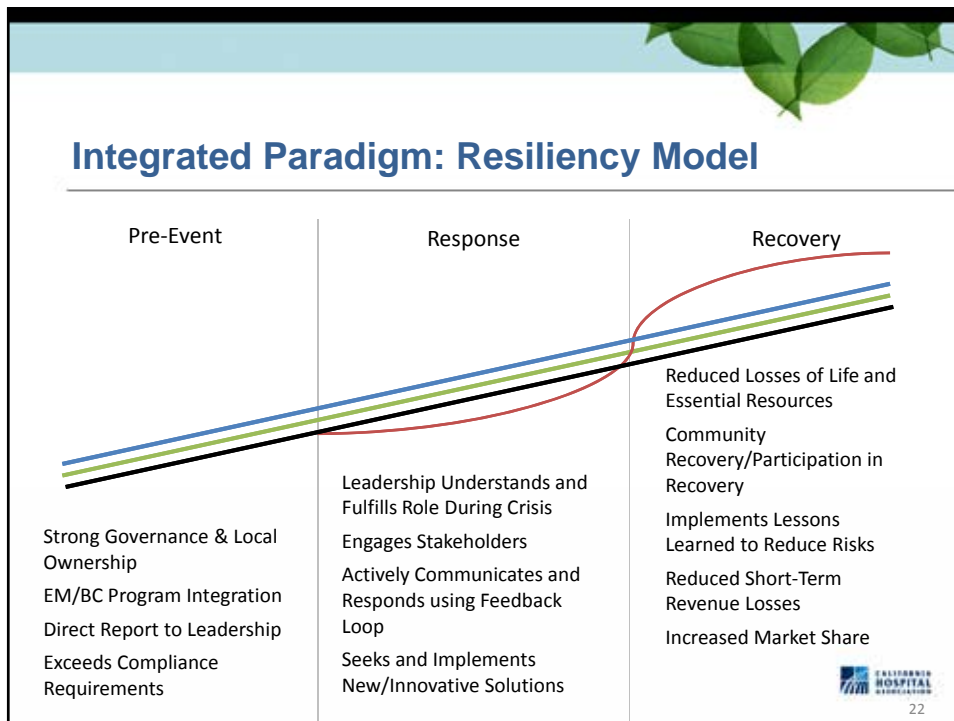
## Compliance-Based Paradigm: Adequacy Model



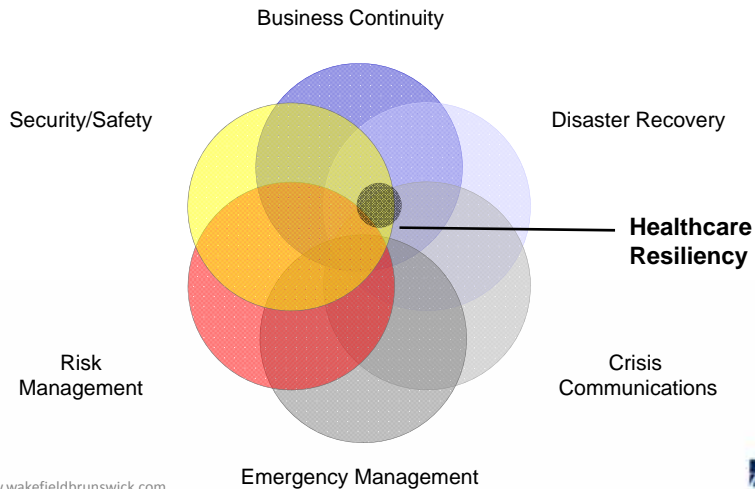
**In Vermont, one of the top concerns for Rutland (Vt.) Regional Medical Center was getting supplies to the 137-bed hospital following road closures and flooding in the southern region of the state.**

**Shore Health System’s Dorchester General Hospital, Cambridge, Md., evacuated patients early Sunday morning because of wind and water damage from Irene and closed for several days. The decision was made after severe damage to the laboratory room warranted the lab’s closure. The hospital also saw damage to its operating rooms, central supply, some patient rooms and chemotherapy unit.**

**Bon Secours Hampton Roads Health System in Norfolk, Va., said two of its hospitals operated on emergency generators for several hours, but all of its hospitals and emergency departments remained open and accepted new patients. Zultanky credited the smooth operations to planning and lessons learned from Hurricane Isabel in 2003.**



## EM/BCP Integration Healthcare Resiliency Model



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To establish and maintain a program that effectively prepares and responds to emergencies and maintains the continuation of essential clinical, research, business and administrative operations in the event of natural, technological, man-made or public health emergencies.

**Disaster Recovery Planning (DRP), which is focused on:**

Continuity/recovery of the Information Technology systems, infrastructure, and telecommunication services

**Business Continuity Planning (BCP), which is focused on:**

Maintaining continuity of healthcare delivery by sustaining or reestablishing functional capabilities

**Emergency Management (EM)**

An integrated approach to the management of emergency programs and activities for all four emergency phases (mitigation, preparedness, response, and recovery), for all types of emergencies and disasters

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## Emergency Management & Business Continuity Program

### Disaster Recovery Planning (DRP), which is focused on:

Continuity/recovery of the Information Technology systems, infrastructure, and telecommunication services

### Business Continuity Planning (BCP), which is focused on:

Maintaining continuity of healthcare delivery by sustaining or reestablishing functional capabilities

### Emergency Management (EM)

An integrated approach to the management of emergency programs and activities for all four emergency phases (mitigation, preparedness, response, and recovery), for all types of emergencies and disasters



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## Governance

Data & Resources for Decision Support

Alignment with Organizational Priorities

### Disaster Recovery Planning (DRP), which is focused on:

Continuity/recovery of the Information Technology systems, infrastructure, and telecommunication services

### Business Continuity Planning (BCP), which is focused on:

Maintaining continuity of healthcare delivery by sustaining or reestablishing functional capabilities

### Emergency Management (EM)

An integrated approach to the management of emergency programs and activities for all four emergency phases (mitigation, preparedness, response, and recovery), for all types of emergencies and disasters

An integrated, multi-disciplinary program focused on supporting and strengthening the organization's core mission

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## Aligning BCP with Organizational Strategy

Operational Considerations

Electronic Health Records

Shifting Healthcare Landscape

Regulatory and Funding Considerations

Understand the strategic priorities of your healthcare organization and align program goals and outcomes

## Aligning BCP with Organizational Strategy

Operational Considerations

Electronic Health Records

Shifting Healthcare Landscape

Regulatory and Funding Considerations

Social Value

Patient Safety

Economic Impact

Preserve Jobs

Operational Efficiency and Effectiveness

Protect Assets, Staff and Visitors

## Aligning BCP with Organizational Strategy

Operational Considerations

Electronic Health Records

Shifting Healthcare Landscape

Regulatory and Funding Considerations

Meaningful Use

IS interruptions

BCP as part of an EMR implementation

Clear roles and responsibilities

## Aligning BCP with Organizational Strategy

Operational Considerations

Electronic Health Records

Shifting Healthcare Landscape

Regulatory and Funding Considerations

Accountable Care Organizations

Provider/Insurer Acquisitions

Competition

Market Share

Public image



## Aligning BCP with Organizational Strategy

Operational Considerations

Electronic Health Records

Shifting Healthcare Landscape

Regulatory and Funding Considerations

Minimize Liability  
96 Hour Planning  
ASPR Guidance 2012



## Key Elements of a Hospital Continuity Program



Key Element	Description	Tools/Competencies
Governance	<ul style="list-style-type: none"> <li>Define &amp; Align with executive priorities</li> <li>Establish Steering Committee</li> <li>Project Initiation &amp; Management</li> </ul>	<ul style="list-style-type: none"> <li>Project Management Tools: Software/Excel Spreadsheet for Workplan (Tasks, Resources, Budget) &amp; Status Reporting</li> </ul>
Data	<ul style="list-style-type: none"> <li>Gain an understanding of the risks</li> <li>Report on risks and cost effective strategies to mitigate these risks</li> <li>Measuring the Impact to Patient Care and Patient Safety</li> </ul>	<ul style="list-style-type: none"> <li>Risk Assessment/Hazard Vulnerability Analysis Tool</li> <li>Business Impact Analysis Tool</li> </ul>
Integration	<ul style="list-style-type: none"> <li>Developing Business Continuity Strategies</li> <li>Developing EOP/BCP format and integration</li> </ul>	<ul style="list-style-type: none"> <li>Joint Commission Gap Analysis Grid</li> <li>Cost/Benefit Calculation Tool</li> <li>Industry Benchmarking Data</li> <li>Planning Software or Templates</li> </ul>
Planning	<ul style="list-style-type: none"> <li>Developing and Integrating Business Continuity Plans</li> </ul>	<ul style="list-style-type: none"> <li>Plans</li> <li>Exercise Development Tools (HSEEP, AHRQ)</li> </ul>
Execution	<ul style="list-style-type: none"> <li>Testing and exercises</li> <li>Results monitoring</li> <li>Data collection of gaps and results</li> <li>Data to drive future priorities</li> </ul>	<ul style="list-style-type: none"> <li>Scorecard Template</li> <li>Goal/Metrics Table</li> <li>Action Plan Measures</li> </ul>

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## Case Example



- 6 month project
- 53 Managers and Directors representing 121 clinical, administrative, and research departments
- 100% response rate — compared to the typical industry response rate of 45–85%
- Validated known and identified unknown essential applications



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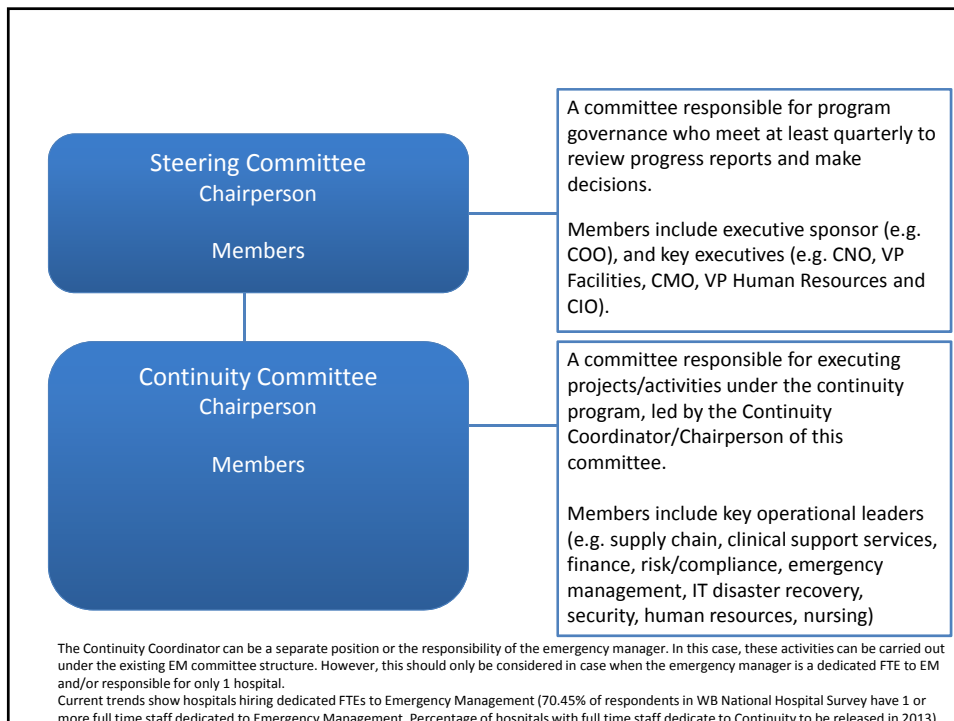
# Governance

Define & Align with executive priorities

Establish Steering Committee

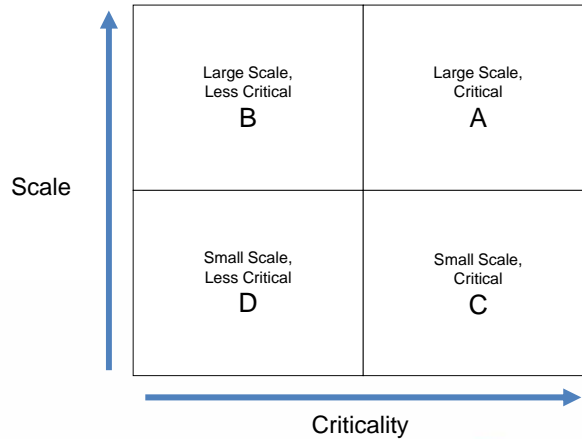
- Executive partnership council that will include both IT people and medical facilities being served
- Medical centers to drive business requirements

Project Initiation & Management



## Data

- Gain an understanding of the risks
- Report on risks and cost effective strategies to mitigate these risks
- Measuring the Impact to Patient Care and Patient Safety



## Data

### Business Impact Analysis

Identify essential services that must be continued to maintain essential operations (supply chain, payroll, research) and healthcare delivery (patient care) following a disaster



## Data—Objectives

- Define the essential functions and systems
- Determine the realistic impact of unplanned disruptions
- Identify organizational and systems interdependencies
- Recommend appropriate safeguards and controls
- Recommend appropriate recovery requirements
- Identify previously unknown application systems
- Quantify increased reliance on IS systems required for service delivery
- Provide data to streamline processes, provide scalability and stewardship of resources
- Identify operational interdependencies and unnecessary redundancies that can support operations improvement
- Identify gaps in processes resulting in risks to patient safety & quality



## Data

Design

Conduct

Analysis

Report

1. Design Data Tables
2. Develop RTO/RPO Matrix
3. Establish Impact Categories
4. Design and Test Questionnaire
5. Establish Communications Schedule



## Design Data Tables

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Minimizes Data Entry

Normalizes Data

- Titles
- Departments
- Location/Building
- Applications



## RTO & RPO

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Recovery Time Objective (RTO) defines the maximum duration of a service or application outage before significant operational, patient care or family experience impacts occur.

Recovery Point Objective (RPO) is the point in time of the last good backup of data offsite at time of disaster and identifies the amount of acceptable data loss.

# RTO/RPO Matrix

RTO/ RPO	< 2 hours	< 8 hours	<48 hours	>48 hours
RPO <1 hour: Little to No Data Loss Tolerated/Unable to recreate data	Tier 1: High avail/Synch	Tier 2: High avail/Asynch		
RPO 24: One day of data loss allowable or can be recreated/ reentered from back log or tape back up			Tier 3: Hot Site	Tier 4: Drop ship/Cold Site



# Impact Categories

**SAMPLE WEIGHT ASSIGNMENTS: IMPACT SCORES**

	Description	Weight
Operations Impact	N/A or blank	0
	>72 hours	1
	<72 hours	3
	<24 hours	5
	< 8 hours	7
	<4 hours	9
	0 hours	11
Patient Safety Impact	9 - null (or blank)	0
	1 - None at all	1
	2 - minimal risk	3
	3 - moderate risk	5
	4 - severe risk	7
	5 - immediately life threatening	14
Family Impact	9 - null (or blank)	0
	1 - none at all	1
	3 - minimal	3
	5 - moderate	5
	4 - severe	7





## Questionnaire

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- Questions that result in measurable data
- Avoid highly subjective questions
- Give specific examples for them to consider



## Data

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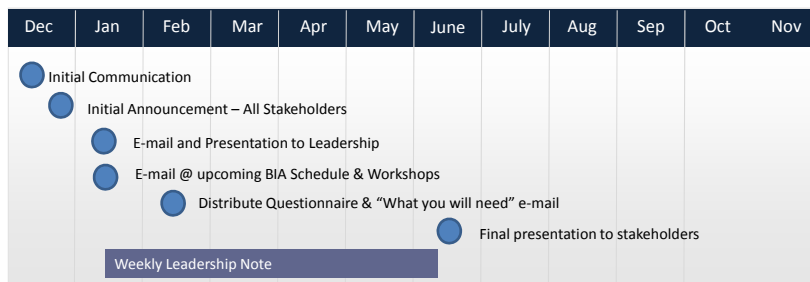
List the 3 most essential functions of the emergency department. For each function:

- How would you rate the risk to patients when this function is not available?
- Identify essential dependencies to carry out each essential function.
- List the 3 most essential IT applications for each function.
- How many hours can you continue to perform the essential function(s) while using downtime procedures?

## Lessons Learned

- Collect cost centers associated with each interview
- Ensure number of employees is in either total number or FTE's
- Work all interviewees information from one master spreadsheet; hide columns you do not need
- Capture hours of operation
- Is daily revenue based on 365 days or business days? Does it vary by dept. category (business vs. clinical)?
- Organize all data by same naming convention
  - BIA department title\_(Interviewee, Finance Data, etc.)
  - Normalize data such as drop down menus for essential functions, impacts

## Communications







## Send Invitations

- Upon finalizing the schedule, send invitations to each interviewee and their Vice President.
- Each interviewee receives the questions in advance.

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## Deliver Workshop

- BIA Team
- Informational Workshop



Design

Conduct

Analysis

Report

1. Aggregate Data
2. QA Data
3. Conduct Analytics

# QA Data



Essential Functions & Services

Evaluate Processes

Risk Assessment

HVA development: Probability, Impact, Risk

Impacts

Hospital \$/Day Impact  
Dept \$/Hr Impact

Critical Applications

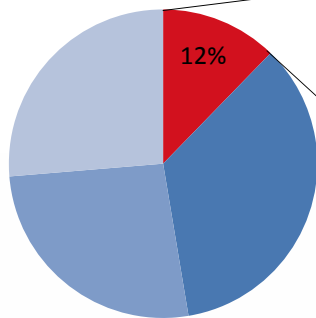
Time, \$'s to Severe Impact for Dependencies

Dashboard Reports

# Patient Safety

## Essential Functions by Patient Safety Risk

■ Life Safety ■ Severe ■ Moderate ■ Low



**Anticipated functions identified as essential**

**Functions of previously unknown importance to the safety of patients**



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# Operational Impact

## Operational Impact

*Daily Operational Impact: The impact to departments when an application or essential function is unavailable.*

Function	Department	Productivity Loss
Patient Scheduling	Scheduling	50%
Laboratory Services	Lab Administration	40%
Emergency Care & Treatment	Emergency Room	50%
Patient Care	Ambulatory Services	50%
Diagnostic Radiology	Radiology Administration	75%
Clinical Care	Hematology and Oncology Clinic	50%
Patient Care	Medical Unit	50%
Patient Care	Intensive Care Unit	75%

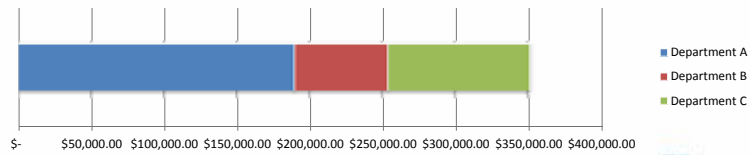


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# Financial Impact

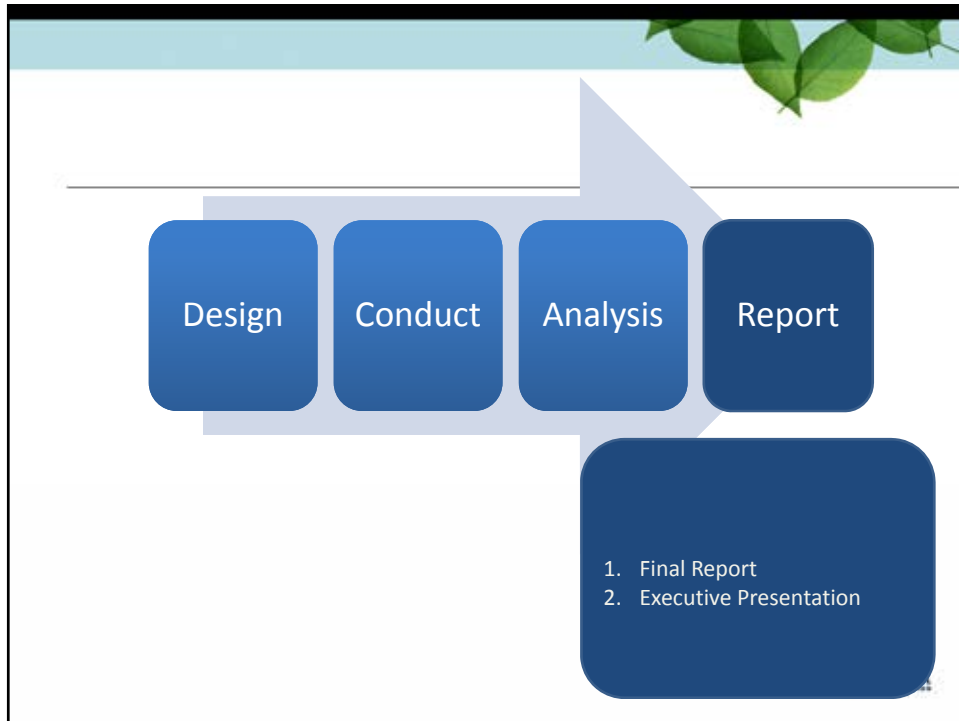
Reflects the cumulative financial impact of downtime per day across impacted departments

DEPARTMENTS	FINANCIAL IMPACT
Department A	\$189,000.00
Department B	\$64,000.00
Department C	\$98,000.00
<b>TOTAL FINANCIAL IMPACT</b>	<b>\$351,000.00</b>



## IT Application Recovery Tiers


<b>Tier 1</b>	Definition:	Critical Services for Core Hospital Operations and Patient Safety
	Recovery Point Objective (RPO):	Within 15 minutes from original point of failure
	Recovery Time Objective (RTO):	Less than 2 hours after declaration of disaster
	Capacity Assumptions:	Limited capacity until event – On demand scale up within RTO
<b>Tier 2</b>	Definition:	Important Services – May be dependent on a Tier 1 service or application
	Recovery Point Objective (RPO):	Within 15 minutes from original point of failure
	Recovery Time Objective (RTO):	Within 72 hours after declaration of disaster
	Capacity Assumptions:	Limited capacity until event – Scale up within 24 to 72 hours after declaration
<b>Tier 3</b>	Definition:	“Other” Services – little or no impact to Tier 1/2 restorations and recovered after
	Recovery Point Objective (RPO):	Within 15 minutes from original point of failure
	Recovery Time Objective (RTO):	Within 3 – 7 days after declaration of disaster
	Capacity Assumptions:	Limited capacity until event – Scale up within 7 – 14 days after declaration
<b>Tier 4</b>	Definition:	Non-time Sensitive Services – can defer recover beyond 14 days
	Recovery Point Objective (RPO):	Within 15 minutes from original point of failure
	Recovery Time Objective (RTO):	Within 30 days after declaration of disaster or recover as needed
	Capacity Assumptions:	Limited capacity until primary facility restored



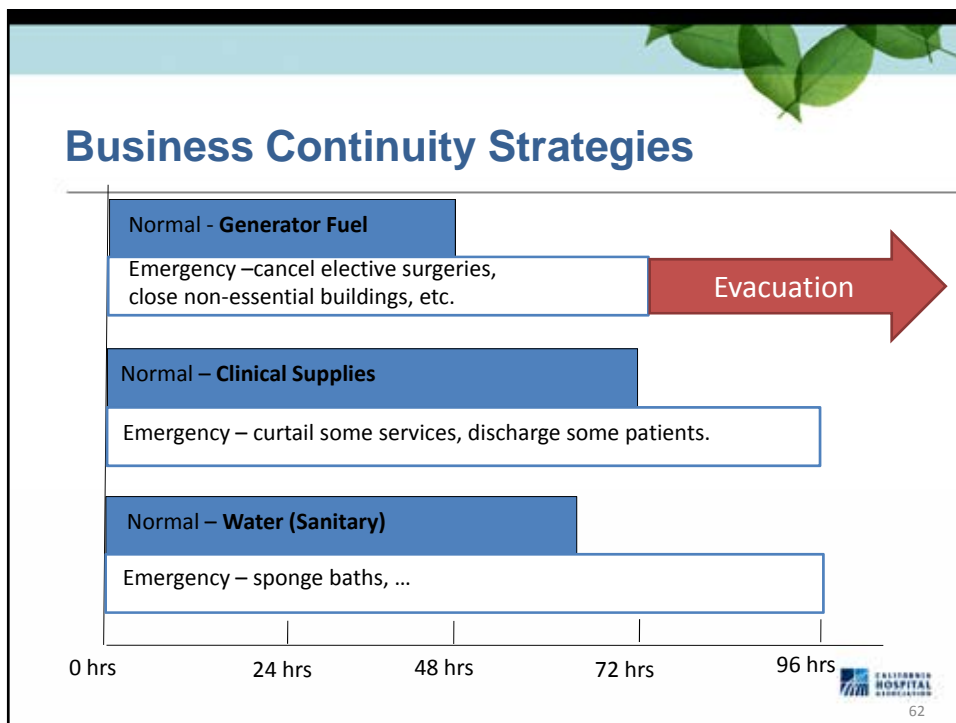
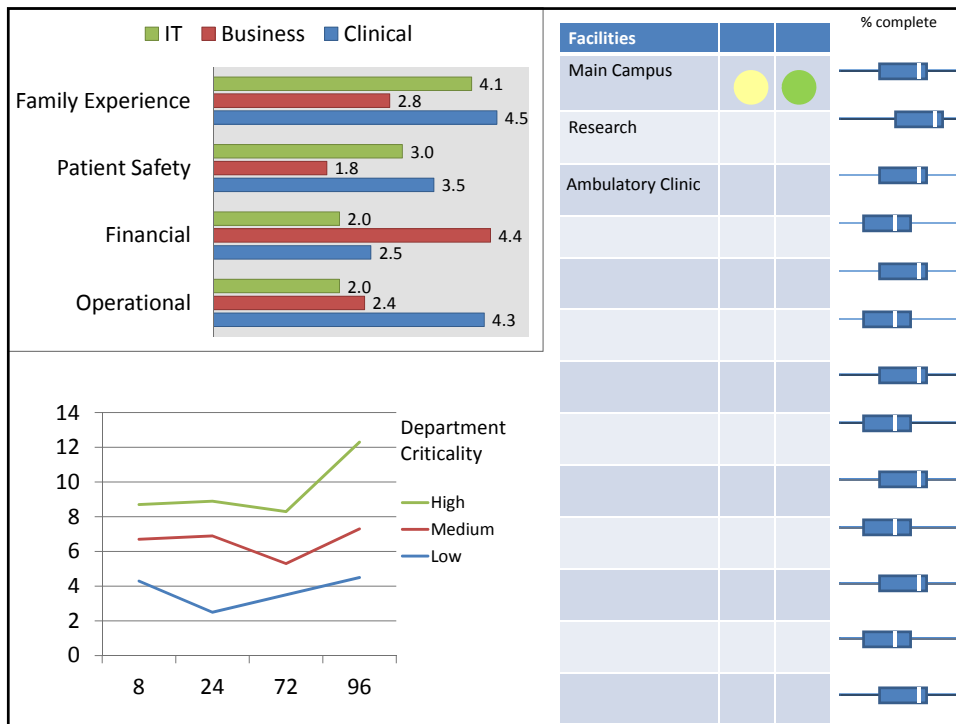
## Data

Create and Deliver Presentation to Leadership

- Prepare a draft BIA report using the initial impact findings and issues
- Provide a statement of the organizational goals and objectives
- Summarize the impacts of those goals and objectives as a result of a disruption
- Provide a summary of the resource requirements over time to recover and resume operations
- The relative rankings of functions and applications
- The timeframes for RTOs and their implications
- The gap between current capabilities and requirements as defined by the BIA



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## Plan Components



- HICS and the Business Continuity Branch Director
- Supply Chain Interruptions
- Alternate Site Operations
- Vital Record and Vital Equipment
- IT and Operational Interdependencies
- HR Considerations
- Loss of Services (IT, Non-Medical)
- Loss of Facility
- Administrative and Research Divisions
- Recovery and Resumption of Operations

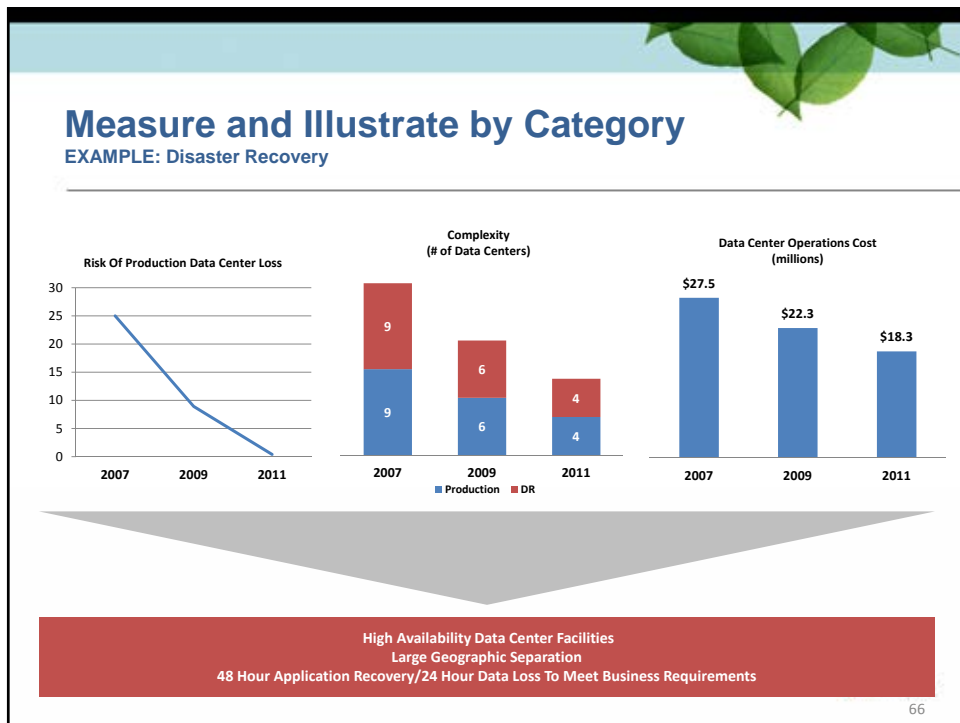
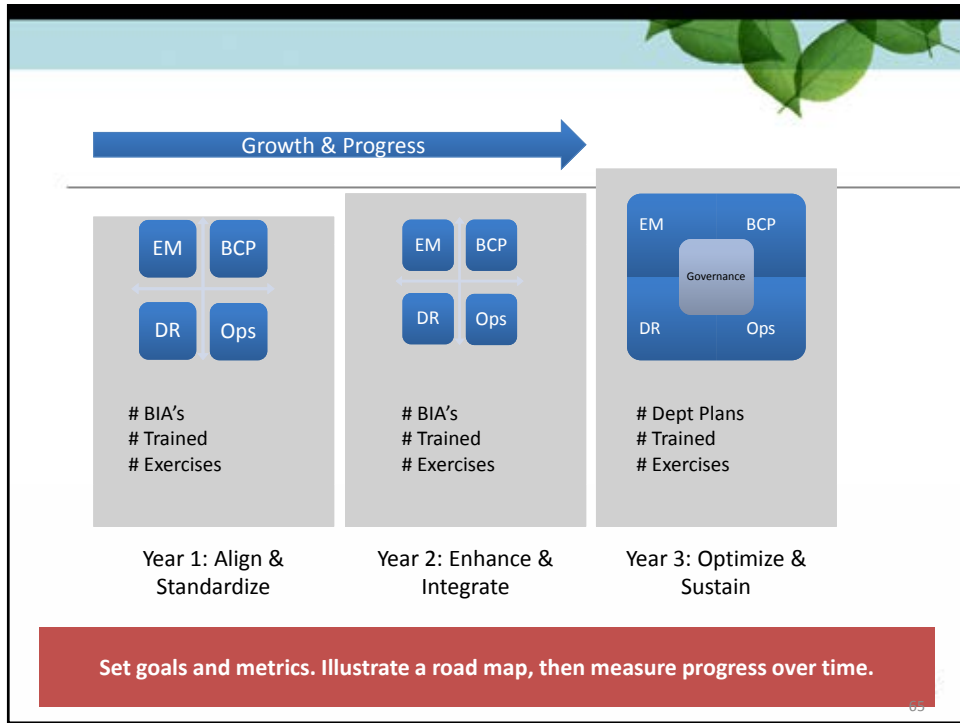
## Business Continuity Planning Effective 96 Hour Assessment


### CORE CRITERIA

- WATER
- FOOD
- SUPPLIES
- SANITATION
- TRANSPORTATION
- COMMUNICATION

Lesson Learned: All essential elements of the medical response to a mass casualty incident are sustained by a system of critical non-medical elements that provide essential infrastructure.







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“Instead of worrying about evacuating or taking care of additional numbers of people, we had to ask, what if the facility closes? Can we make insurance claims? Do we know how to relocate our information technology? How would we reopen? How can we contact staff, who might be spread out all over the country? What if you lose all communications, and don’t have Internet access? What do you do if you have to restart your business after it has been closed for weeks? These are huge learning curves that our staff had to figure out on the fly.”

–Les Hirsch, Past President and CEO of Touro Infirmary during Katrina



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## Thank You

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