Beyond the Mandate — Hospital Business Continuity Post-Earthquake

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A thirty year veteran in management and marketing, Glen Granholm began working in the preparedness field in 1993 helping schools in Oregon prepare for earthquakes. As the director for seismic services programs at ETC Building and Design, Glen has led seismic retrofitting and construction projects at multiple California hospitals. As the coordinator of outreach and education for the Bay Area Earthquake Alliance, Glen is heavily involved in the seismic readiness education for businesses, schools and communities. He is also a member of the Cascadia Region Workgroup, and is a frequent speaker at California organizations such as the American Society of Safety Engineers and the International Facility Managers Association. Most recently, Glen is working with the City of San Francisco's offices of earthquake resiliency and emergency management in training residents about earthquake readiness, and is teaming with the Federal Alliance for Safer Homes in launching the new national Quake Smart business preparedness program.

The Scenario
Responding to Disaster

The Problem:
25 dead in Chatsworth, California
September 18, 2008 Metrolink Train Crash

Responding to Disaster (cont.)

The Solution:
The National Transportation Safety Board has since confirmed that the engineer, who failed to obey a red light, was sending and receiving texts, although investigators have yet to determine whether his cell phone use was the cause of the crash, NPR reports. The California Public Utilities Commission has, however, **banned all train personnel in California from using cell phones or other wireless devices while on duty in an emergency measure.**
Responding to Disaster (cont.)

The Problem:
230 schools damaged
March 11, 1933 Long Beach 6.4 Earthquake

Responding to Disaster (cont.)

The Solution:
The Field Act (April 10, 1933)
Responding to Disaster (cont.)

The Problem:
Hospital collapse
February 9, 1971 Sylmar 6.6 Earthquake

The Solution:

1. The **Alquist-Priolo Earthquake Fault Zoning Act** was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy; this state law was a direct result of the 1971 San Fernando Earthquake

2. The California Seismic Safety Act was passed in 1975

3. The California Seismic Safety Commission was formed in 1975
The Problem:
Hospital systems failure
January 19, 1994 Northridge 6.7 Earthquake

But… It’s Just a Sprinkler Head!
Responding to Disaster (cont.)

The Solution:
SB 1953, February 25, 1994

Responding to Disaster?

What about these places?
Surely there are laws in place that secure…
The Box Store where I shop:
Not Really

What about these places?
Surely there are laws in place that secure…
My Local Library
What about these places?
Surely there are laws in place that secure…

My Lab:
What about these places?
Surely there are laws in place that secure…

My Office:

Responding to Disaster? (cont.)

What about these places?
Surely there are laws in place that secure…

My Local Grocery Store:

Every picture tells a story
Responding to Disaster? (cont.)

What about these places?
Surely there are laws in place that secure…
My Home:

My Facility is Compliant with the Mandate!

Breathing Room
NPC Compliance Timelines Based on Location

**HOSPITAL A — 2015**

**HOSPITAL B — 2030**

What is: Critical Care?
My Facility is Compliant with the Mandate! (cont.)

Mabel Zumwalt, Dr. Burton Krell. Lionel Ventura

Lessons Learned — Watsonville Community Hospital

My Facility is Compliant with the Mandate! (cont.)

The Building Code Will Protect Us!
What is the Bottom Line?

Are we completely 'D?'

Is There a Bright Side?

So there was an earthquake?
Please tell us something funny concerning it.
Misery Loves Company…

A Midwestern View on Earthquakes

A Scientific Approach…

Earthquake Education
It Could be Worse…

CRACKER BARREL...

WORST PLACE TO BE WHEN A EARTHQUAKE HITS....

Let’s Get Creative!

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Have You Numbed Out to the Problem?

Does the Mandate Matter?

- What lessons are learned from the mandate?
- The 3 Es: Engineer, Educate, Enforce
- What lessons can hospitals learn from other entities?
How do Others Do It?

Case Study Wall: The World of No Mandate

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Ask the Tough Questions!

The intent of the SB1953 is to ensure critical hospital procedures continue uninterrupted.

With my retrofitted and mandate compliant facility ready for the big one, where are we likely to conduct business post-earthquake?

Most common answer:
Ask the Tough Questions! (cont.)

The intent of the SB1953 is to ensure critical hospital procedures continue uninterrupted. With my retrofitted and mandate compliant facility ready for the big one, where are we likely to conduct business post-earthquake?

Most common answer: **In the Parking Lot**

Ask the Tough Questions! (cont.)

Are my co-workers going to be able to stick around post-earthquake?

Case Study:
Oakland Elementary School
Ask the Tough Questions! (cont.)

Does my post-earthquake plan match my pre-earthquake planning?

If the plan is to serve food from our kitchen, is the equipment secured?

Ask the Tough Questions! (cont.)

Does my post-earthquake plan match my pre-earthquake planning?

Is the place where we are all supposed to gather post-earthquake earthquake-ready?
Case Study: Napa Earthquake

A post-earthquake meeting room?

Case Study: Napa Earthquake (cont.)

Before the earthquake questions:
Do racking systems for wine barrels work as earthquake damage reducers?
Case Study: Napa Earthquake (cont.)

Earthquake answer:
Not really.

Case Study: Napa Earthquake (cont.)

Post-earthquake:
What do we do then?
Stack even higher in a different location.
Best Practices

1. Hospital: Continual readiness in more than one hundred buildings with ever-changing environments
2. Company: How to track employees post disaster in a large geographical area
3. Community: How an at-risk community got earthquake ready

Let’s Get Ready

3 Steps to Personal Earthquake Safety
(Home, business, school, hospital, store, life)
- Secure your space (5 Parts)
- Get 10 days worth of provisions
- Become part of an organized response (Company, CERT, NERT)
Let’s Get Ready (cont.)

Secure your space (5 Parts)

Test questions — can it:
1. Hurt me?
2. Block me?
3. Explode?
4. Bankrupt me?
5. Cause a big pain in the rear?
If so — secure the item!
Let’s Get Ready (cont.)

Engineered Solutions
Flexible Fasteners 1.5 Ip

Let’s Get Ready (cont.)

Engineered Solutions
Flexible Fasteners 1.5 Ip
Best Practices

Have You Got Any:

Use Your Inner-MacGyver

Best Practices (cont.)

Do you want to…

Stand in Line?
Granholm Family

Kit Essentials

Become part of an Organized Response:

CERT
COMMUNITY EMERGENCY RESPONSE TEAM
Best Practices: Teach One Another

Tips & Tricks
Best Practices: It’s Not a Ride, It’s the Epicenter!

The Scenario Revisited
Does Preparedness Matter?

Thank you

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