

1 Problem

What	Problem(s)	Damage, flooding from hurricane/ tropical storm
When	Date	October 29, 2012
	Time	7:10 PM (landfall at Atlantic City, New Jersey)
Where	Different, unusual, unique	Massive storm system with high winds
	Geographic location	New York City, New York
	Facility, site	Major medical institutions
	Task being performed	Treating patients
Impact to the Goals		
	Patient Safety	Risk to patient safety, health
	Employee Safety	Risk to employee safety, health
	Patient Services	Evacuation of patients
	Schedule/ Operations	Closures/ partial closures of hospitals
	Property/ Equipment	Repairs, response, long-term protection
	Labor/ Time	>\$800 million
	Frequency	Similar issues from Hurricane Irene in 2011
		This incident Annualized Cost Billions

HOSPITAL HURRICANE PREPAREDNESS Cause Map

After Hurricane Sandy, medical centers work to prevent future issues

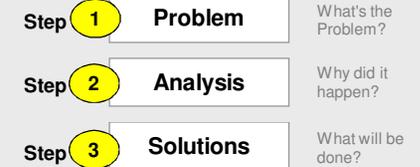
"What we see regarding hospital readiness for large-scale disasters are random acts of preparedness. Hardy sufficient."

- Irwin Redlener, director of the National Center for Disaster Preparedness, Columbia University

Cause Mapping is a Root Cause Analysis method that captures basic cause-and-effect relationships supported with evidence.

CAUSE MAPPING

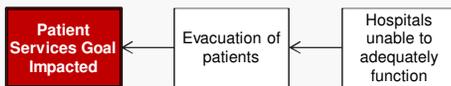
Problem Solving • Incident Investigation • Root Cause Analysis



As a result of Hurricane Sandy, multiple hospitals in New York City were evacuated, many of which earned accreditation by the Joint Commission - which includes criteria for emergency preparedness and backup power capacity. NYU Langone Medical Center has upgraded its infrastructure and purchased flood barriers which can be deployed in the case of flooding. The hospital was reimbursed \$150 million for rebuilding costs by the federal government shortly after the storm. Bellevue Hospital Center, where the basement flooded in 45 minutes and took 5 days to pump out, also installed flood barriers and will be raising its backup generator's fuel pumps from the basement. Coney Island Hospital has elevated its outside electrical equipment and installed temporary barriers, but is looking at the elevation of its emergency department, which is on the first floor.

2 Analysis

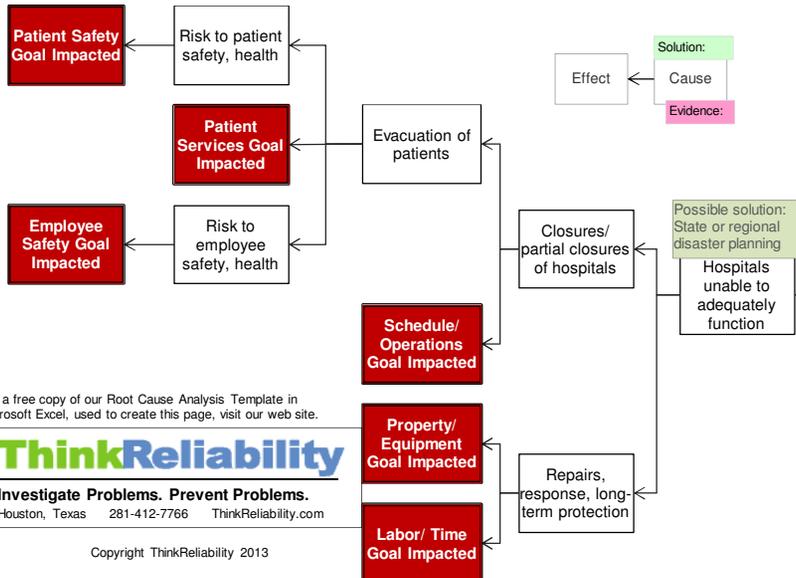
Basic Level Cause Map - Start with simple Why questions.



Basic Cause-and-Effect

As a result of both infrastructure damage and power failures due to Hurricane Sandy, many hospitals in the New York City area had to be evacuated. Medical centers in the impacted areas are still recovering, while trying to determine what should be done to prevent future risk - and who should be responsible.

More Detailed Cause Map - Add detail as information becomes available.



For a free copy of our Root Cause Analysis Template in Microsoft Excel, used to create this page, visit our web site.

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