

HOSPITAL ADMINISTRATOR

# POST DISASTER FUNCTIONAL CHECKLIST





### **Purpose**

The document is meant as a simple checklist to be used by the Hospital Administrator or CEO within 24 hours, after the impact of a natural or man-made hazard. Its objective is to determine the immediate level of safety and functionality of the hospital. It does not replace a detailed post-disaster assessment, nor it is intended to be a description of minimum standards.

The decision whether or not to evacuate the hospital based on structural integrity should be following a detailed assessment undertaken by a structural engineer. The assessment will require experienced judgment to a considerable extent.

Similarly the decision to reconnect or use sensitive mechanical and biomedical equipment should be following an assessment and recommendations made by a mechanical/biomedical/electrical engineer.

From the Hospital Administrator's perspective, one needs to be able to answer the following questions post-disaster: Is the Hospital safe? The facility is assessed in three segments:

S: Structural

N: Non structural

F: Functional Capacity

#### S: Structural

Visual assessment of the structure.

Dete	Determine if the structure is safe									
#	Safety checks	Yes	No	Observations/Comments/Actions (*)						
<b>S1</b>	Do we need to evacuate? Is there perceived imminent danger to patients and staff?									
S2	Is the condition of the structure adequate to allow operations to continue of an acceptable quality and in a safe manner?									
	Are there significant cracks in the load-bearing walls and columns?									
	Also check for cracks in slabs and/ or stairs?									
	Is the roof intact?									
<b>S3</b>	Do we need to relocate a particular service(s) to another section of the facility or must the service(s) be discontinued in-house and be outsourced?			Identify the areas/services affected.						

<sup>(\*)</sup> Note: Observations/ Comments/ Actions: Identify the actions that must be carried out to ensure safe operations at the hospital. Provide practical recommendations based on available resources. Example, completely remove a wall that is partially collapsed; cover partially damaged roof with plastic available locally; etc.

### N: Non-Structural

Asse	Assess integrity of the non-structural aspects and patient care areas							
N1	Accessibility	Yes	No	Observations/Comments/Actions				
	<ul> <li>Is there safe and adequate vehicular access to the hospital?         Check if there is adequate space for ambulances to turn.     </li> <li>Is there safe pedestrian access to the hospital?</li> </ul>							
N2	Parking lots	Yes	No	Observations/Comments/Actions				
	<ul> <li>Are parking lots cleared and safe for usage?</li> </ul>							
N3	Safety of external areas	Yes	No	Observations/Comments/Actions				
	Check safety and security of hospital compound, external to buildings:  • Boundary fence and gate(s) intact?  • Fallen trees/branches?  • Fallen power/telecomm lines and poles?  • External drains free from blockage?  • Are water tanks secured and intact?  • Are security personnel on site?							
N4	Safety of internal areas	Yes	No	Observations/Comments/Actions				
1.	<ul> <li>Check the building interior for any potential sources of injury:</li> <li>Are ceilings and overhead fixtures intact?</li> <li>Are windows and doors secured to walls and able to close?</li> <li>Are shelves, equipment and materials secured from falling?</li> <li>Gases: Are bottles, tanks and gas links secure and without leaks?</li> <li>Electricals: Is the electrical supply safe and reliable? Check correct electrical voltage supply and all phases.</li> </ul>							

2.	Determine if the following hazards are present:  • Smoke/ fire  • Hazardous material spill  • Damage to housed radioactive materials  • Noxious fumes			
N5	Assessment of major systems (lifelines)	Yes	No	Observations/Comments/Actions
Select	YES, if system is functional and, NO, if the systems a	re non-	functio	nal
	<ul> <li>Potable water</li> <li>Is water available in adequate quantities?</li> <li>Is the water safe for use?         Check for chlorination, filtration of contaminants.     </li> <li>Electrical generation         Check the supports of generators.     </li> <li>Fire system</li> <li>Chillers</li> <li>Boilers</li> <li>Fuel supplies         Check for leaks in fuel storage tanks or lines.     </li> <li>Medical gases</li> <li>Elevators         Check the displacement of the elevator capter after an authority     </li> </ul>			
	<ul> <li>cables after an earthquake.</li> <li>Hospital information system (HIS)</li> <li>Check telecomm lines and IT infrastructure.</li> </ul>			
N6	Assessment of sanitation systems	Yes	No	Observations/Comments/Actions
	<ul> <li>Are all toilets functional?</li> <li>Are all hand basin and washing facilities operational?</li> <li>Is the wastewater system functional?</li> <li>Is there a solid waste disposal system operational (for removal of debris)?</li> <li>Is there a medical waste system operational (for sharps, etc.)?</li> </ul>			

## F: Functional Capacity

Determine the functional capacity and capability of the institution. Identify the gaps. Please fill out the checklist for the departments that are present at the hospital.

Assessment of critical areas including equipment functionality							
F1	Emergency Room	Yes	No	Observations/Comments/Actions			
	Bed capacity:  Has there been a reduction in bed capacity? (list number of beds currently available)  Is there capability to improvise or increase bed capacity? (list number of addditional beds)						
	Equipment:  Vital sign monitors  Sphygmomanometer  Suction device and connective tubing  Medical gases and regulators  Stretchers with mattresses  Wheel chairs  Infusion pumps  ECG machine  Arterial blood gas machine with cartridges  Glucometer machine with strips  Otoscope  IV (intravenous) poles						
	Supplies:  IV fluids  IV administration sets  Heplock  Intracaths  Needles  Cardiac electrodes  Resting ECG electrodes  Syringes  Nebulization sets						

	<ul> <li>Oxygen mask</li> <li>Nasal cannula</li> <li>Scalpel blades and handles</li> <li>Tongue depressors</li> <li>Medicine cups</li> <li>Catheters</li> <li>Personal protective equipment</li> <li>Disposable gowns and masks</li> <li>N95 masks</li> <li>Sutures</li> <li>Gloves: disposable and surgical</li> <li>Extrication collars</li> <li>Spinal boards and splints</li> <li>Bandages</li> <li>Bedpans and urinals</li> <li>Others</li> </ul>			
	<ul> <li>Stationary</li> <li>Registration forms</li> <li>Nurses notes</li> <li>Diagnostic requisition forms</li> <li>Treatment sheets and drug recording forms</li> </ul>			
F2	Intensive Care Unit (ICU)	Yes	No	Observations/Comments/Actions
	YES, if items are present and functional and, NO, if tall prior to event, leave blank.	he item	is are in	sufficient or non-functional. If equipment was not available at
	<ul> <li>Bed capacity:</li> <li>Has there been a reduction in bed capacity? (list number of beds currently available)</li> <li>Is there capability to improvise or increase bed capacity? (list number of</li> </ul>			
	addditional beds)			

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	Equipment and supplies:  Ventilator  Vital sign monitor  Infusion pump  Medical gases  Medication refrigerator  Defibrillator  Ambu bags and mask  Blood gas machine  Suction device  Stocked crash cart  Others				
F3	Neonatal Intensive Care Unit (NICU)	Yes	No	Observations/Comments/Actions	
Select YES, if items are present and functional and, NO, if the items are insufficient or non-functional. If equipment was not available at hospital prior to event, leave blank.					
	<ul> <li>Bed capacity:</li> <li>Has there been a reduction in bed capacity? (list number of beds currently available)</li> <li>Is there capability to improvise or increase bed capacity? (list number of addditional beds)</li> </ul>				
	Equipment and supplies:  Incubator  Medical gases  Vital signs monitors  Ventilator  Suction device  Potable water (Check for leaks in storage tanks)  Means of heating water (mixing of baby food)  Medication refrigerator  Infant warmer (billiblanket)				

(continues on next page)

F4	Operating Theatre (OT)	Yes	No	Observations/Comments/Actions			
	Select YES, if items are present and functional and, NO, if the items are insufficient or non-functional. If equipment was not available at						
nospii	al prior to event, leave blank.			I			
	Equipment:						
	Anaesthetic machine						
	Operating theatre table						
	Defibrillators						
	Suction device						
	Airway equipment						
	Operating room lights						
	Surgical diathermy						
	• Fluid warmer						
	Stocked crash cart						
	Medical gases						
	Autoclave						
	Air condition						
	Refrigerator		Ш				
	Supplies:						
	Laparotomy sets						
	Bladder retractor for C-sections						
	Self-retaining retractor						
	Delivery sets						
	Sterile drapes						
	Air way supplies						
	Medication	ΙЩ					
	Sterile instruments						
	General & fine surgical sets						
	Base bone set						
	<ul> <li>Tension band wiring sets</li> </ul>						
	External fixation devices						
	Tracheostomy sets						
	Craniotomy sets						
	Thoracic set						
	Ophthalmic set						
	Vascular set						
	Intermittent pneumatic compression						
	device						
	<ul> <li>Anti-embolism compression stockings</li> </ul>						

F5	<ul> <li>Drugs for resuscitation</li> <li>Surgical gowns</li> <li>Sutures</li> <li>Others</li> </ul> Wards	Number of Beds	Is there adequate staff?		Is the adeq esse eques	uate ntial ıip-	Observations/Comments/Actions
			Yes	No	Yes	No	
	Female medical						
	Male medical						
	Female surgical						
	Male surgical						
	Other:						
F6	Sterilisation Depa	rtment	Yes	No		0	bservations/Comments/Actions
Select	YES, if items are present and fur	nctional and, NO, if t	he iten	ns are in	sufficier	nt or no	n-functional.
	<ul> <li>Autoclave machines</li> </ul>						
F7	Dialysis		Yes	No		0	bservations/Comments/Actions
	YES, if items are present and fur ot available at hospital prior to e		he iten	ns are in	sufficiei	nt or no	n-functional. State in comments, if equipment
	<ul><li>Dialysis machine</li><li>Water</li><li>Water treatment (reverse</li><li>All dialysis supplies</li></ul>	osmosis) plant					

F8	Blood bank	Yes	No	Observations/Comments/Actions					
	<ul><li>Refrigerated storage</li><li>Blood warmers</li><li>Administration sets</li><li>Lab testing equipment and supplies</li></ul>								
Assessment of ancillary services									
F9	Radiology	Yes	No	Observations/Comments/Actions					
	YES, if items are present and functional and, NO, if to available at hospital prior to event.	he item	s are in:	sufficient or non-functional. State in comments, if equipment					
	Equipment:  MRI  CAT Scan  Ultrasound  General radiographic/ fluoroscopic equipment  Film processor/ computerised radiography system (CR reader)  View boxes/ picture archiving communicating system  Mammography system  Computers								
	Supplies:     Films     Cassettes     Processing equipment & chemicals     Contrast media								
F10	Laboratory	Yes	No	Observations/Comments/Actions					
	YES, if items are present and functional and, NO, if to available at hospital prior to event.	he item	s are in	sufficient or non-functional. State in comments, if equipment					
	<ul> <li>Immunology analyser</li> <li>Hematology analyser</li> <li>Chemistry analyser</li> <li>Centrifuge</li> <li>Blood bank cooler and freezer</li> <li>Platelets</li> </ul>								

	<ul> <li>Agitator</li> <li>Reagents and sample refrigerator</li> <li>Microscope</li> <li>Autoclave</li> <li>MicroB incubator</li> <li>Water purification system</li> </ul>							
F11	Pharmacy	Yes	No	Observations/Comments/Actions				
Select	YES, if items are present and functional and, NO, if	the item	is are in	sufficient or non-functional.				
	Equipment:  • Medication refrigerators							
	Availability of general drugs:  Broad spectrum antibiotics  Antihistamines  Steroids  Non-steroidal anti-inflammatory drugs (pain medication)  Narcotics  Broad spectrum anti-bacterial/ fungal ointments & lotions  Tetanus toxoid  Proton pump inhibitors (acid reducing products)  Opiates							
	Are there adequate sanitary kits:  Male (adult) Female (adult) Child Babies							
Note on General Drugs: Refer to WHO list of essential medicines on: http://www.who.int/medicines/publications/essentialmedicines/en/ as it relates to your hospital's level of care.  For the Caribbean, refer to the OECS Guidelines on Medicines List on: http://apps.who.int/medicinedocs/documents/s19546en/s19546en.pdf.								

F12	Mortuary	Yes	No	Observations/Comments/Actions		
	YES, if items are present and functional and, NO, if to ot available at hospital prior to event.	the item	is are in	sufficient or non-functional. State in comments, if equipment		
	<ul><li>Refrigerator/ freezer room</li><li>Body trolley(s)</li><li>Autopsy room</li><li>All consumables</li></ul>					
F13	Laundry	Yes	No	Observations/Comments/Actions		
Select YES, if items are present and functional and, NO, if the items are insufficient or non-functional. State in comments, if equipment was not available at hospital prior to event						
	<ul><li>Washing machine</li><li>Dryer</li><li>Flat work ironer</li><li>Boiler</li></ul>					
F14	Kitchen	Yes	No	Observations/Comments/Actions		
	Is there the ability to prepare, serve and distribute meals?					
F15	Hygiene & Infection control	Yes	No	Observations/Comments/Actions		
	<ul> <li>Microcon unit: mobile hospital air purification; cleans the air in TB cases</li> <li>Personal protective equipment (PPE)</li> <li>Disinfectant</li> </ul>					
F16	Housekeeping & Cleaning	Yes	No	Observations/Comments/Actions		
	<ul> <li>Are there adequate supplies to undertake housekeeping activities?</li> <li>Are there adequate supplies to undertake cleaning activities?</li> </ul>					
F17	Medical records	Yes	No	Observations/Comments/Actions		
	<ul><li>Are patient records safe and accessible?</li><li>Is there capability to develop and store records for new patients?</li></ul>					

F18	Communication	Yes	No	Observations/Comments/Actions					
	<ul> <li>Is there reliable communication available between the Hospital Emergency Opera- tion Centre (EOC) and all staff?</li> </ul>								
Staff	Staff availability by department								
F19	Staff Availability	Yes	No	Observations/Comments/Actions					
Select	Select YES, if there is adequate staff available, either present at the hospital or on call and, NO, if there is insufficient staff.								
	Staff by department:  Emergency Room  ICU  NICU  Operating theatre(s)  Sterilisation department  Dialysis  Blood bank  Radiology  Laboratory  Pharmacy  Mortuary  Laundry  Kitchen  Hygiene & Infection Control  Housekeeping & cleaning  Medical Records  Communication								

## Summary

#### **Structural**

Is the hospital structure safe to continue to be functional? Tick the appropriate box.

Safe	Partially safe	Unsafe/ need to evacuate	
Comments: Identify specific areas that a	are deemed unsafe and immediate action	to be taken:	
opening and a control of the control			

#### **Non-Structural**

Assessment of the integrity of the non-structural aspects of the hospital; whether they are safe and functional, partially functional or unsafe or non-functional. Tick the appropriate box.

Non-structural aspect	Safe and functional	Partially safe/ partially functional	Unsafe/non- functional	Comments/immediate action
Accessibility				
External areas and parking lots				
Internal areas				
Major systems (lifelines)				
Sanitation				

#### **Functional**

Assessment of the current functionality and capability of the hospital. If the department does not exist at the hospital, leave blank.

Overall bed capacity of the hospital:	
Number of beds prior to the event:	
Number of beds after the event:	
Can bed capacity be increased? If yes, by how many beds:	
Staff availability at the hospital:	

**Comments:** *Identify immediate staff requirements (not currently available) per department to ensure normal operations:* 

Critical functional areas	Functional	Partially functional	Non- functional	Comments/immediate action
Emergency room, ER				
Intensive Care Unit, ICU				
Neonatal ICU (NICU)				
Operating theatre(s), OT				
Sterilisation department				
Dialysis				
Blood bank				
Auxiliary functional areas	Functional	Partially functional	Non- functional	Comments/immediate action
Radiology				
Laboratory				
Pharmacy				
Mortuary				

Laundry			
Kitchen			
Housekeeping and cleaning			
Medical records			
Communication			
Other			
Immediate action in order of	of priorities:		

## Notes

