

Disaster Risk Reduction Symposium/Disaster Reduction Alliance Forum 2009  
 Hospitals Safe from Disaster: Securing Health and Medical Services  
 -Messages from Hyogo-Kobe-

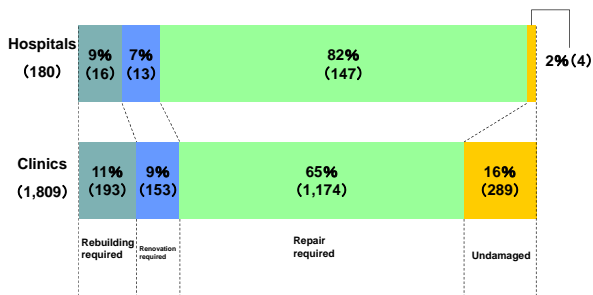
Message from Hyogo-Kobe Based on the Experience of the  
 Great Hanshin-Awaji Earthquake

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 Health Promotion Association

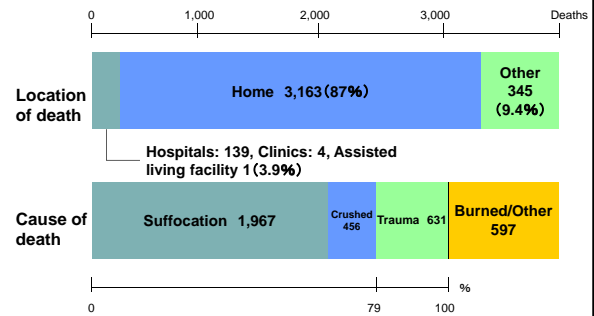
## Situation Report

1. Damage and Deaths at Medical Institutions
2. Clinical Breakdown and Causes
3. Patients and Convalescence
4. Ensuring Medical Services in Stricken Areas
5. Building an Emergency Medical Services System for Disasters

## Damage to Medical Institutions



## Locations and Causes of Death (3,651 Deaths)



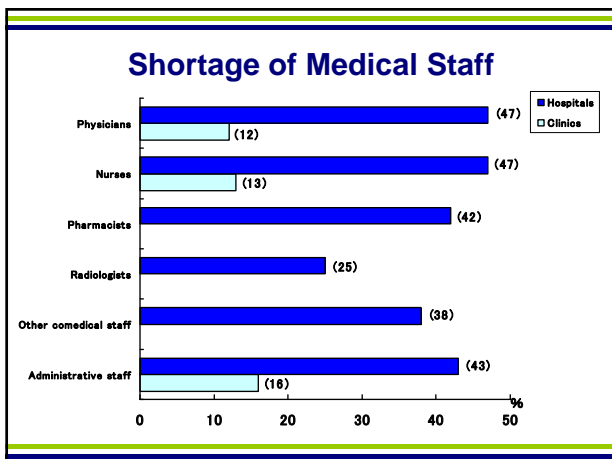
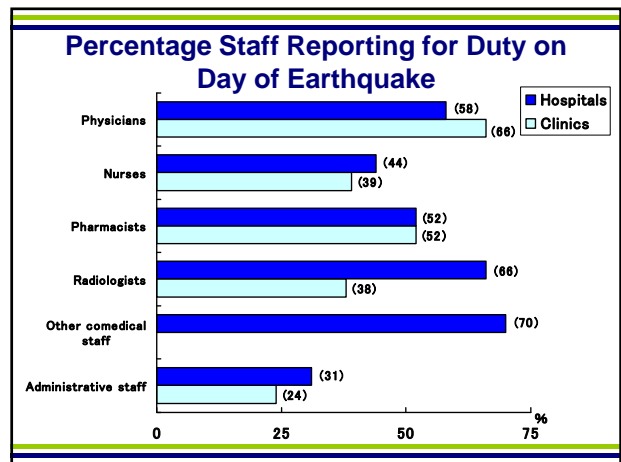
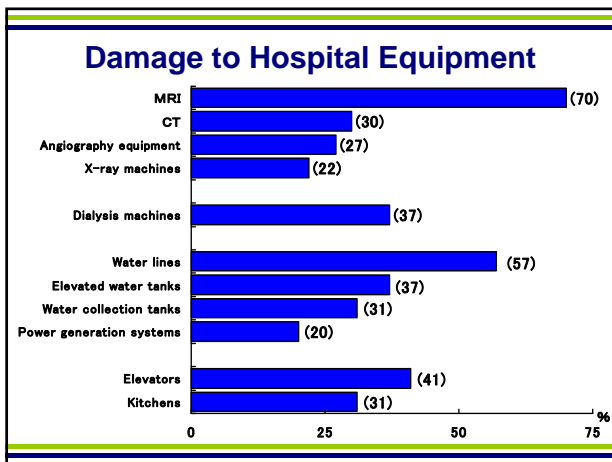
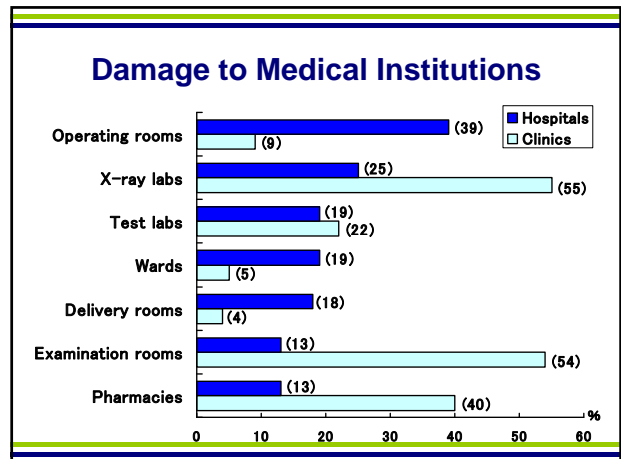
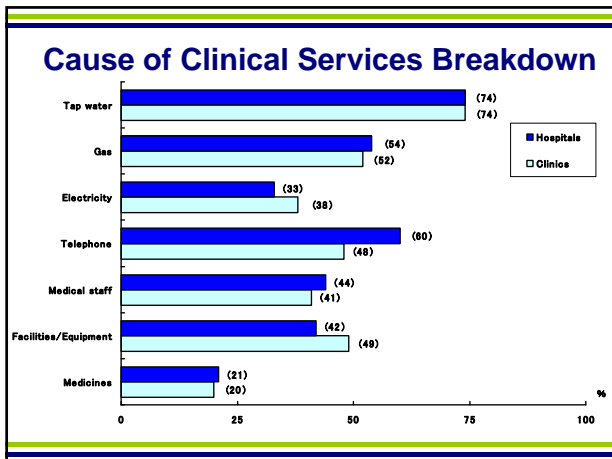
## Presumed Time of Death (2,306 Autopsies)

Date/Time of death	Deaths	Total deaths (%)
01/17	~6:00	2,221 (96.3)
	~9:00	16 (97.0)
	~12:00	47 (99.0)
	~24:00	12 (99.6)
01/18	5	2,301 (99.8)
01/20	2	2,303 (99.9)
01/21	1	2,304 (99.9)
01/22	1	2,305 (100)
01/25	1	2,306 (100)

## Post-Disaster Medical Services Survey and Autopsies

Post-Disaster Medical Services Survey (Investigative Committee, Hyogo Disaster Medical Services System)  
 Survey objective Build medical service system for disasters  
 Survey period March 2 ~ 5, 1995  
 Survey target 224 hospitals, 2,999 clinics  
 Replies 182 hospitals, 1,845 clinics  
 Response rate Hospitals: 81%, Clinics: 62%

Autopsies (Coroner, Medical Services Dept., Hyogo Health and Environment Bureau)  
 Implementation period Jan. 17 ~ 29, 1995  
 Medical examiners 212  
 Autopsied bodies Male: 1,472, Female: 1,165, Unknown: 14  
 Total: 3,651 (of which 45% were age 65 and above)



### Hospital Patients (173 Hospitals)

		Patients	Compared to usual
Out-patient	Day of earthquake	15,782	0.50
	1st week after earthquake	71,517	0.32
	DOA (Included)	677	27
Hospitalized	Day of earthquake	4,154	6.9
	1st week after earthquake	20,815	7.0
	Death/Discharge (Included)	1,132	1.1

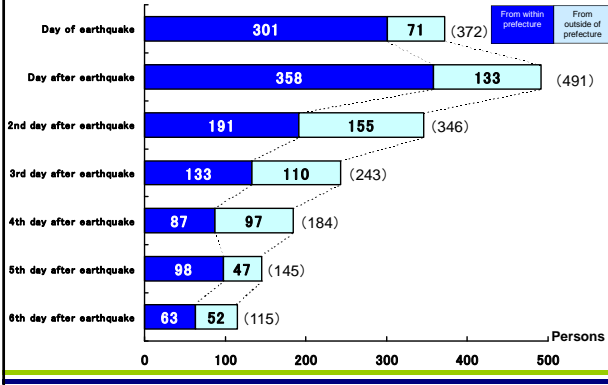
### Clinical Patients and Severity of Conditions (814 Clinics)

	Minor	Serious	Critical	Total
Day of earthquake	7,303 (91%)	590 (7.4%)	121 (109 DOA included) (1.5%)	8,014
1st week after earthquake	103,440 (98%)	1,894 (1.8%)	221 (0.2%)	105,555

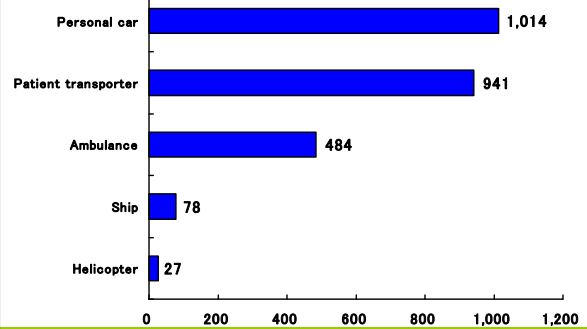
### Hospitalized Patients and Convalescence

	Patients	Deaths	Death rate (%)
Crush syndrome	317	39	12.3
Other factors	2,170	66	3.0
Malady			
Respiratory disorder	1,132	87	7.7
Circulatory disorder	451	44	9.8
Digestive disorder	356	13	3.7
Urinary disorder	195	17	8.7
Obstetric & Gynecological disorder	354	0	0
Other	957	151	5.8
(Subtotal)	3,070	312	10.2
Total	5,557	417	7.5

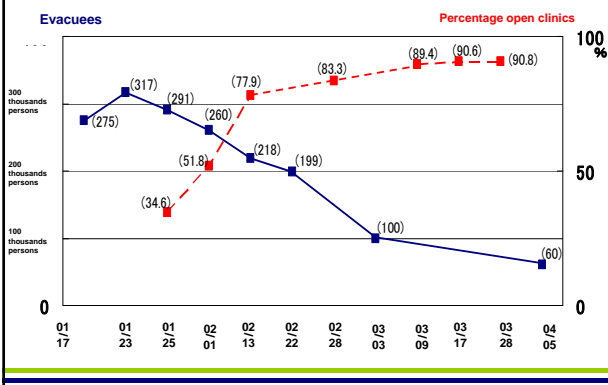
### Patient Transport (Persons)



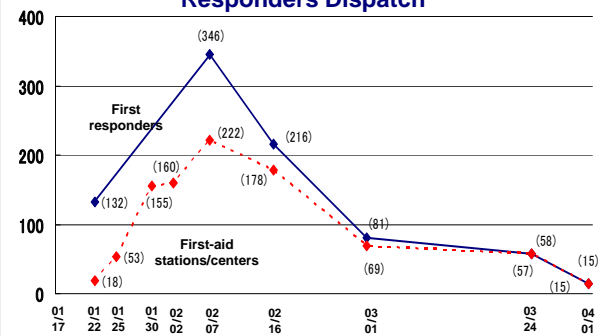
### Means of Patient Transport (1st Week after Earthquake)



### Evacuees and Clinic Activities



### First-Aid Station/Center Setup and First Responders Dispatch



## **Fruits of Creative Recovery**

### Modernization Projects for Medical Institutions

Hyogo Emergency Medical Center  
Disaster Base Hospitals  
    Disaster Medical Services Coordinator  
    Stockpile System (i.e., medicines, etc.)  
Hyogo Institute for Traumatic Stress

Hyogo Wide-Area Disaster, Emergency Medical Care  
Information and Instruction System

Emergency Transport System

First Response System for Disasters  
Disaster Specialist Volunteer System, Wide-Area  
Support System