

Damages and Response to Great East Japan Earthquake

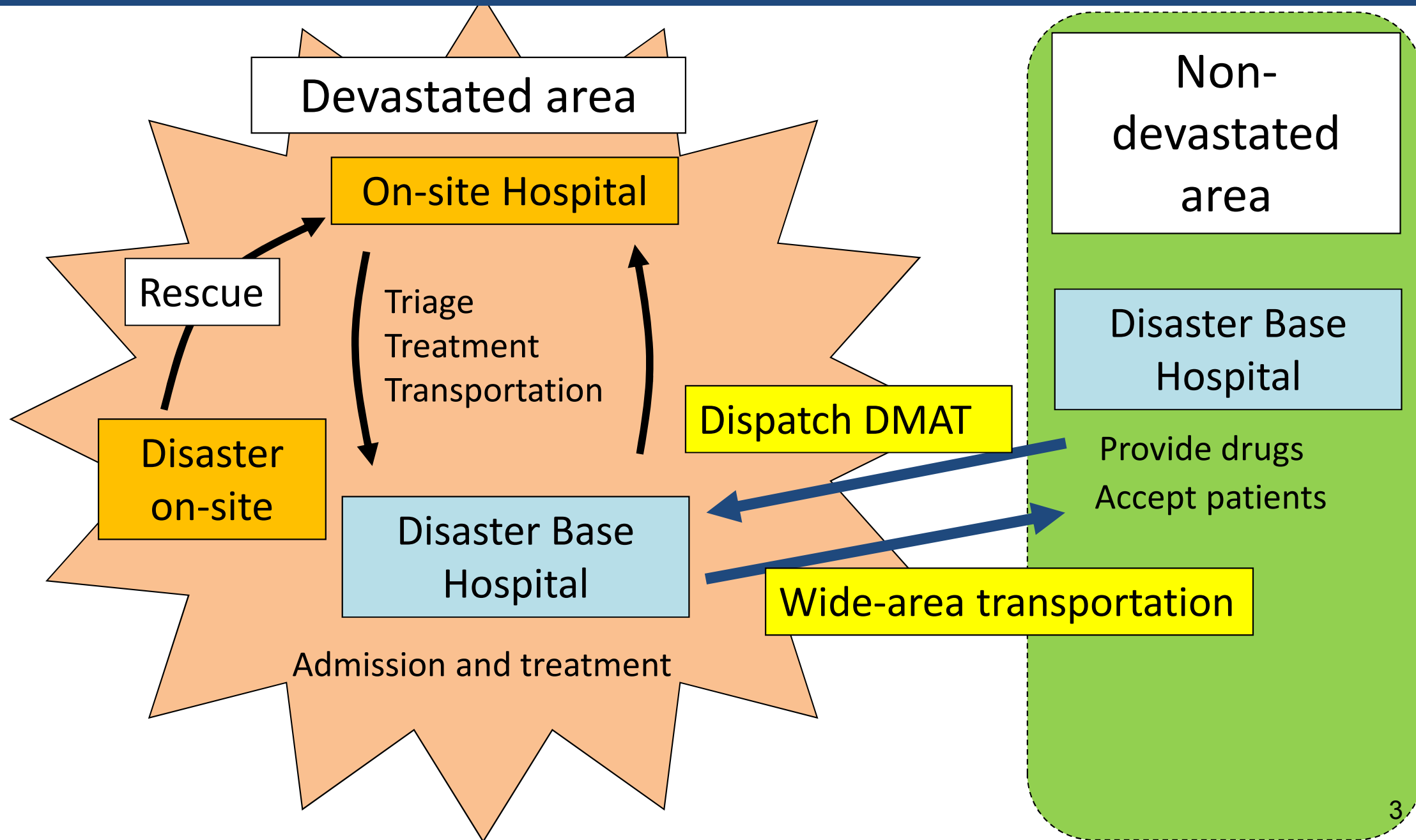


**Guidance of medical service division,
Health policy bureau, MHLW, JAPAN**

content

- Disaster Base Hospital
- JAPAN Disaster Medical Assistance Team (DMAT)
- Emergency Medical Information System(EMIS)
- JAPAN DMAT activities in the Great East Japan Disaster (3.11)

Disaster Medical System



Disaster Base Hospital

Disaster Base Hospital

- 695 Disaster Base Hospitals (as of April, 2015)



- 61 Core Disaster Base Hospitals
Generally, one core hospital in each prefecture
- 634 Regional Disaster Base Hospitals
One regional hospital in each secondary medical service area

Requirements for Disaster Base Hospital

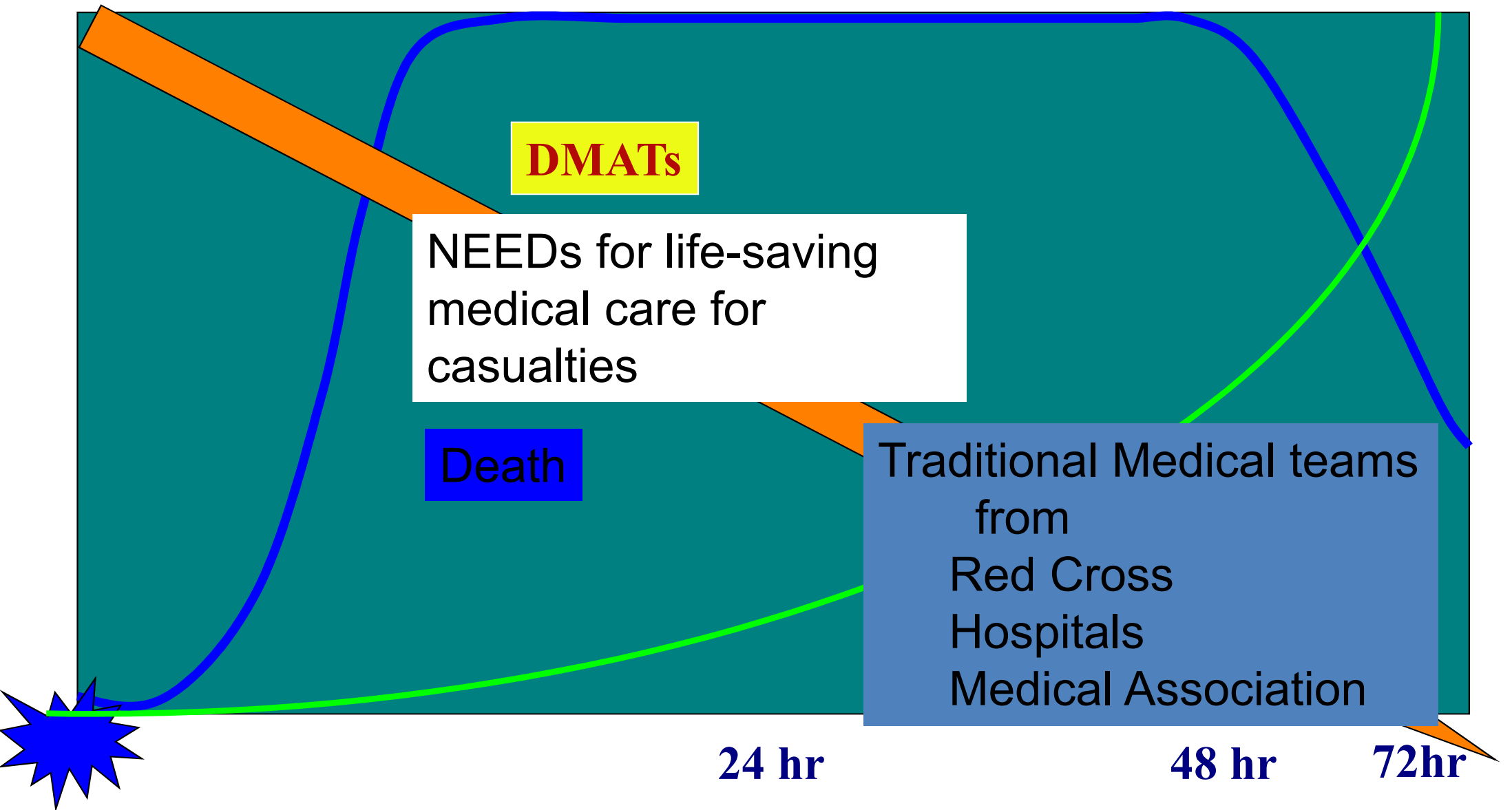
- Respond within 24 hours in emergency, accept and transport injured people from disaster area
- Heliport on the hospital premises
- Dispatch medical team (DMAT) to disaster area
- To have sufficient rooms and folding beds to respond and accommodate emergency patients (expected to receive double of inpatients and five times of outpatients during an emergency)
- Supply lifelines such as water and electric power (prepare water tanks and private power generators)
- Store food and drinking water

etc.

JAPAN Disaster Medical Assistance Team (DMAT)



Basic concept of Japan DMAT



Main Roles of DMAT

- Give medical support to Disaster Base Hospitals
- 3Ts (Triage, Treatment, Transport) in devastated area including wide-area medical air transportation
- Give medical support to Staging Care Unit (SCU)*

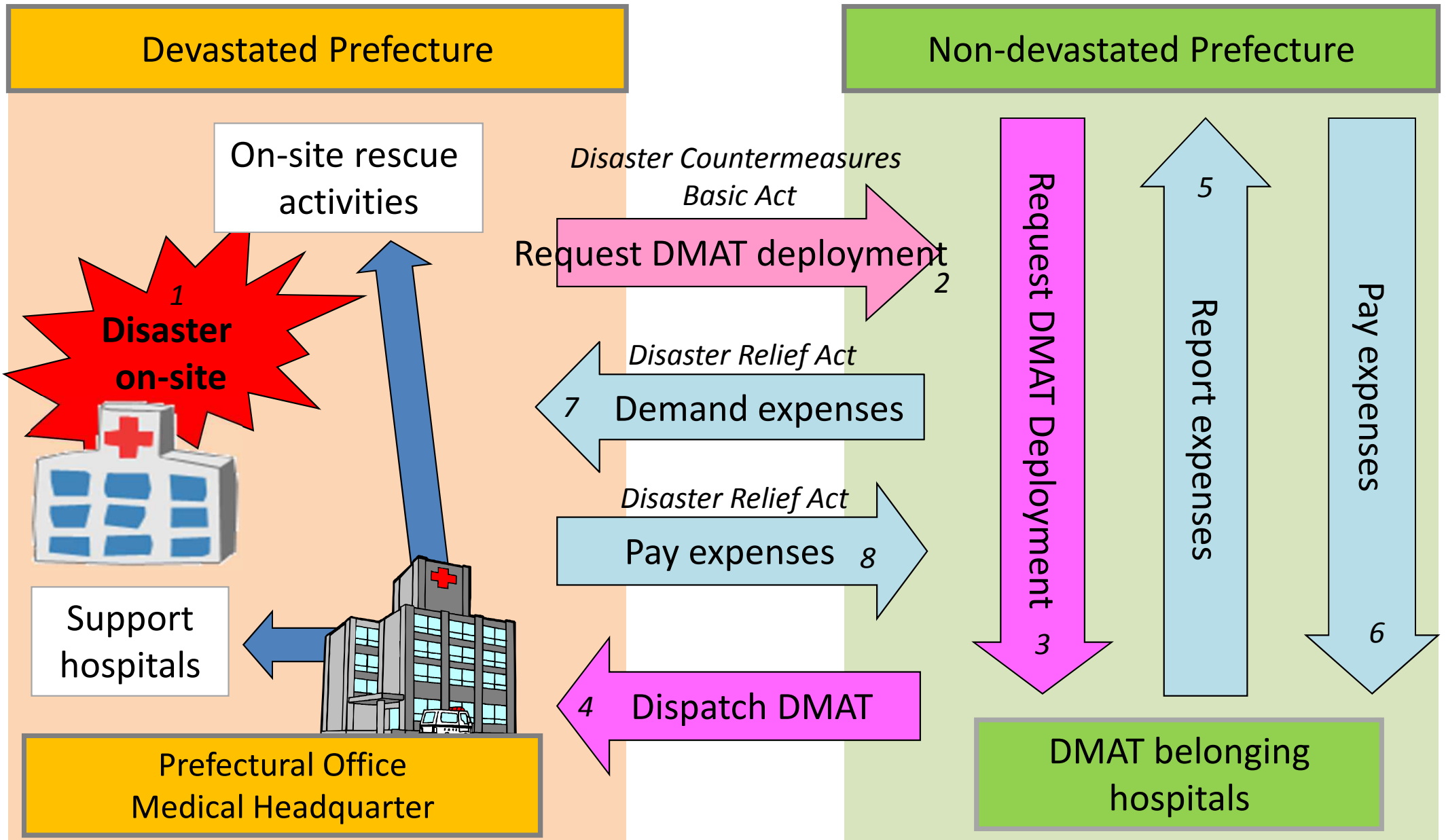
**SCU: a medical strong point for evacuation to non-devastated area, usually located in military and commercial airports*

Structures and Activities in JAPAN DMAT

Respond to	Natural and man-made disasters
Control by	Prefectures and Ministry of Health, Labour and Welfare (MHLW)
Under Law/Act	Disaster Countermeasures Basic Act
Number of teams	1,426 teams (as of April 2015)
Number of personnel in each team	4 personnel, hospital-based* (typically composed of 1 physicians, 2 nurses, 1 logisticians)
Deployment	within 48 hours

**Hospitals which have DMAT receive medical incentive fees*

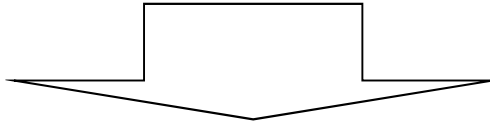
Medical Team Deployment System



JAPAN DMAT Secretariat (established in 2010)

Disaster Medical Assistance Team, Health Policy Bureau

Coordinate with prefectures during disaster occurrence



DMAT Secretariat

- National Hospital Organization Disaster Medical Center (Tachikawa city, Tokyo)
- National Hospital Organization Osaka Medical Center

Peace time

- Administer Japan DMAT Exploratory Committee
- Run training courses
- Register new personnel
- Update roster of personnel

Disaster

- Coordinate with devastated Prefecture (Commander DMAT) and Disaster Base Hospitals
- Provide information to DMAT personnel
- Collect information (hospital damage, patient number) from Emergency Medical Information System (EMIS)
- Support DMAT activities

Emergency Medical Information System (EMIS)

Characteristic EMIS

- Information Sharing Tool
- Information
 - Needs:
 - Hospital damage
 - Patients number in hospital
 - Resource
 - Capacity of hospital: Check in normal time
 - DMAT Activity
- Information List
 - For sharing
 - For Hospital Management

1. Emergency input items (information just after occurrence)

広域災害救急医療情報システム - 緊急入力 - Microsoft Internet Explorer

ファイル(F) 編集(E) 表示(V) お気に入り(A) ツール(T) ヘルプ(H)

Home > 関係者メニュー > 緊急入力

Emergency input (information just after occurrence)

Last renewal date 2005/10/12: 20:00

Please tick items applicable to your medical institution.

There is collapse or danger of collapse of the buildings or the medical facilities.	<input type="checkbox"/>
The number of accepted patients exceeds the capacity.	<input type="checkbox"/>
It is impossible to use lifeline . (Impossible to have medical activities)	<input type="checkbox"/>
Others/remarks Put reasons except the above why accepting patients is difficult.	<input type="checkbox"/>

Medical institutions with no check marks in the above items means it is possible to accept patients.

* Please click entry button even if there are no check marks.

Entry

Home > 関係者メニュー > 緊急入力

2. Input items of detail information

広域英吉救急医療情報システム - 詳細入力 - Microsoft Internet Explorer
ファイル(F) 編集(E) 表示(V) お気に入り(A) ツール(T) ヘルプ(H)
Home > 関係者メニュー > 詳細入力

Detail input (medical institution information)

Input the present information of the medical institution.

• **Function of the medical institution** Last renewal date 2005/10/12: 20:01
Please check applicable items.

• Impossible to accept patients who need operations	<input type="checkbox"/>
• Impossible to accept patients who need dialysis	<input type="checkbox"/>

• **The number of accepted patients with serious/medium illnesses**
Input the number of patients who are accepted at present. (Not accumulation)

Number of serious cases (Red tag)

Number of medium cases (Yellow tag)

• **Patient transferring information**

Number of serious cases which need to be transferred

Of the above, number of cases which need extended transferring
(Cases which meet the standard for extended transferring)

• **Situation of lifeline**
Please check applicable items.

• Impossible to use electricity	<input type="checkbox"/>
• Impossible to use water	<input type="checkbox"/>
• Impossible to use medical gas	<input type="checkbox"/>

• **Others**
Please put comments such as access conditions, if any.

Entry

Monitoring Picture

医療機関状況モニター - 広域災害救急医療情報システム - Microsoft Internet Explorer

2007/02/10 13:36:32 時点の情報を表示しています。 [画面説明]

再表示間隔: 再表示しない 表示順: 医療機関名順に表示

最新情報表示/設定 閉じる

緊急情報表示 詳細情報表示

※現在このページは「詳細情報表示」で

Emergency information

Detail information

印刷イメージ

××県 2006/10/10 09:37 以降の入力情報です。

医療機関名	代行入力	患者の受け入れが困難	倒壊・倒壊の恐れあり	受入人数限界超	ライフライン使用不可	その他有り	手術患者受入不可	人工透析患者受入不可	受ける患者数		患者転送情報		ライフライン			その他有り	
									重症	中等症	重症	中等症	電気使用不可	水道使用不可	医療ガス使用不可		
△△地方																	
××××××病院	緊急	詳細	◆	◆	◆	◆	◆	◆	3	1	2	3	1	◆	◆	◆	2006/10/10 11:00
××××××病院	緊急	詳細							1	2	0	2	0				2006/10/10 11:00
××××××病院	緊急	詳細															
××××××病院	緊急	詳細	◆	◆	◆	◆	◆	◆	3	1	2	3	1	◆	◆	◆	2006/11/10 11:00
××××××病院	緊急	詳細															
小計									1000	1000	1000	1000	1000				
△△地方																	
××××××病院	緊急	詳細	◆	◆	◆	◆	◆	◆	3	1	2	3	1	◆	◆	◆	2006/10/10 11:00
××××××病院	緊急	詳細															
××××××病院	緊急	詳細							1	2	0	2	0				2006/10/10 11:00
小計									1000	1000	1000	1000	1000				
合計									10000	10000	10000	10000	10000				

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××県 2006/10/10 09:37 以降の入力情報です。

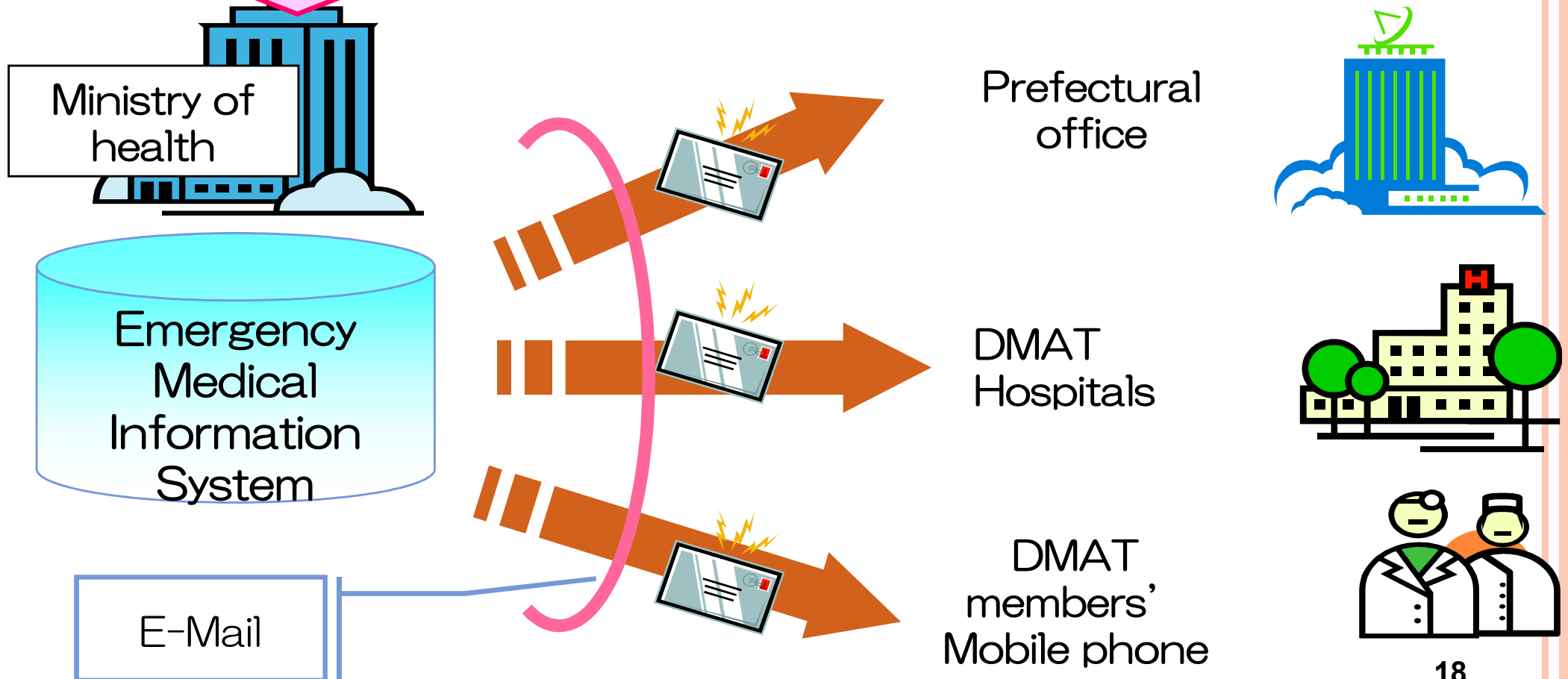
Available Hospital (Blue)

Non Available Hospital (Red)

Representative input

Disaster Notification: Alert for Stand-by

Disaster Affected
Prefectural Office
Turn on "DISASTER
MODE"

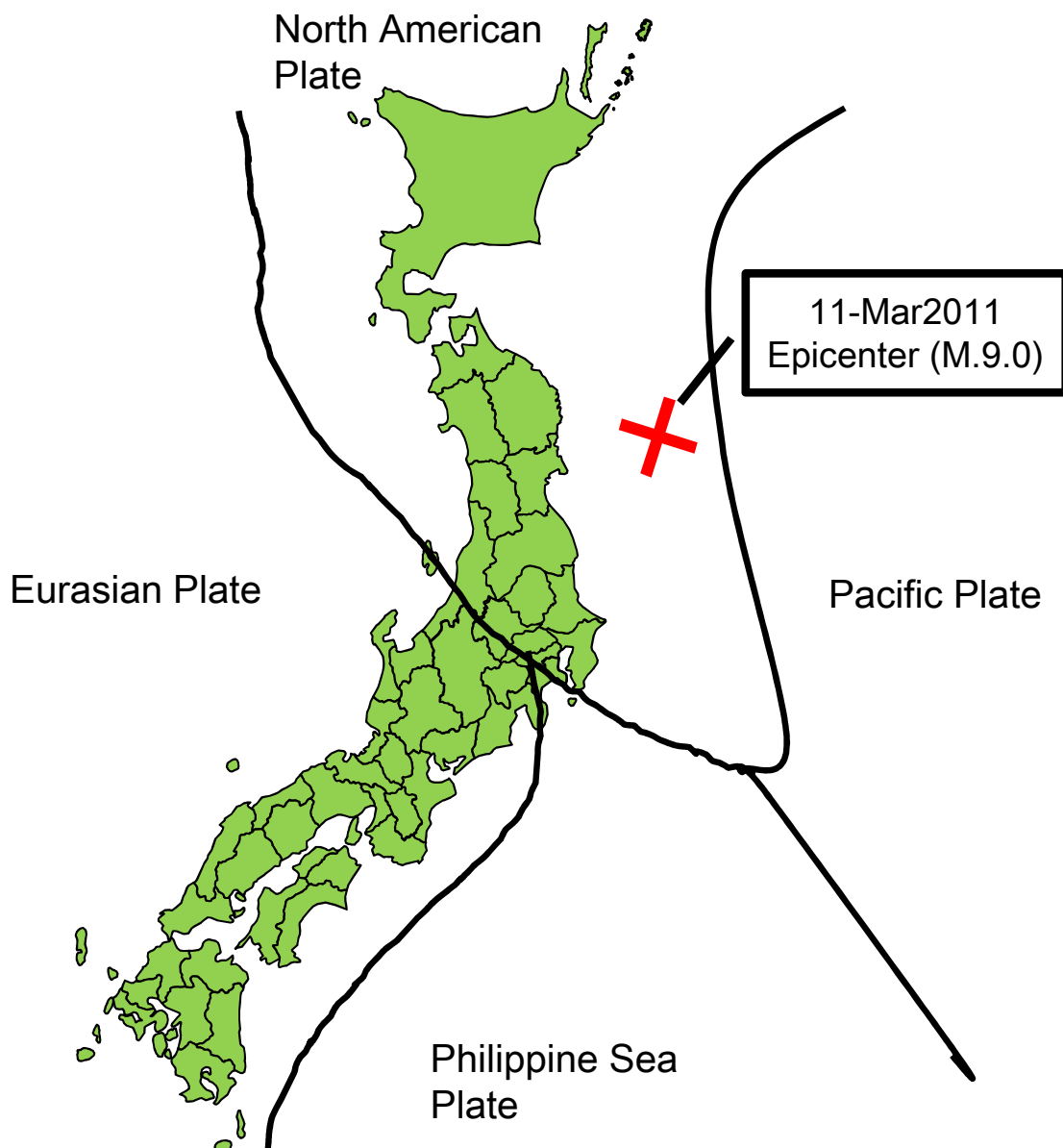


JAPAN DMAT activities in Great East Japan Disaster

Damages in Great East Japan Earthquake



- M9.0 earthquake occurred in the offshore of Sanriku coast at 14:46, 11-Mar 2011. Enormous damages were brought to Tohoku region due to the earthquake and tsunami.
- This is the largest earthquake ever recorded in Japan, 4th largest earthquake in the world after 1900.



Casualty	
Death	15,844
Missing	3,450
Injured	5,891

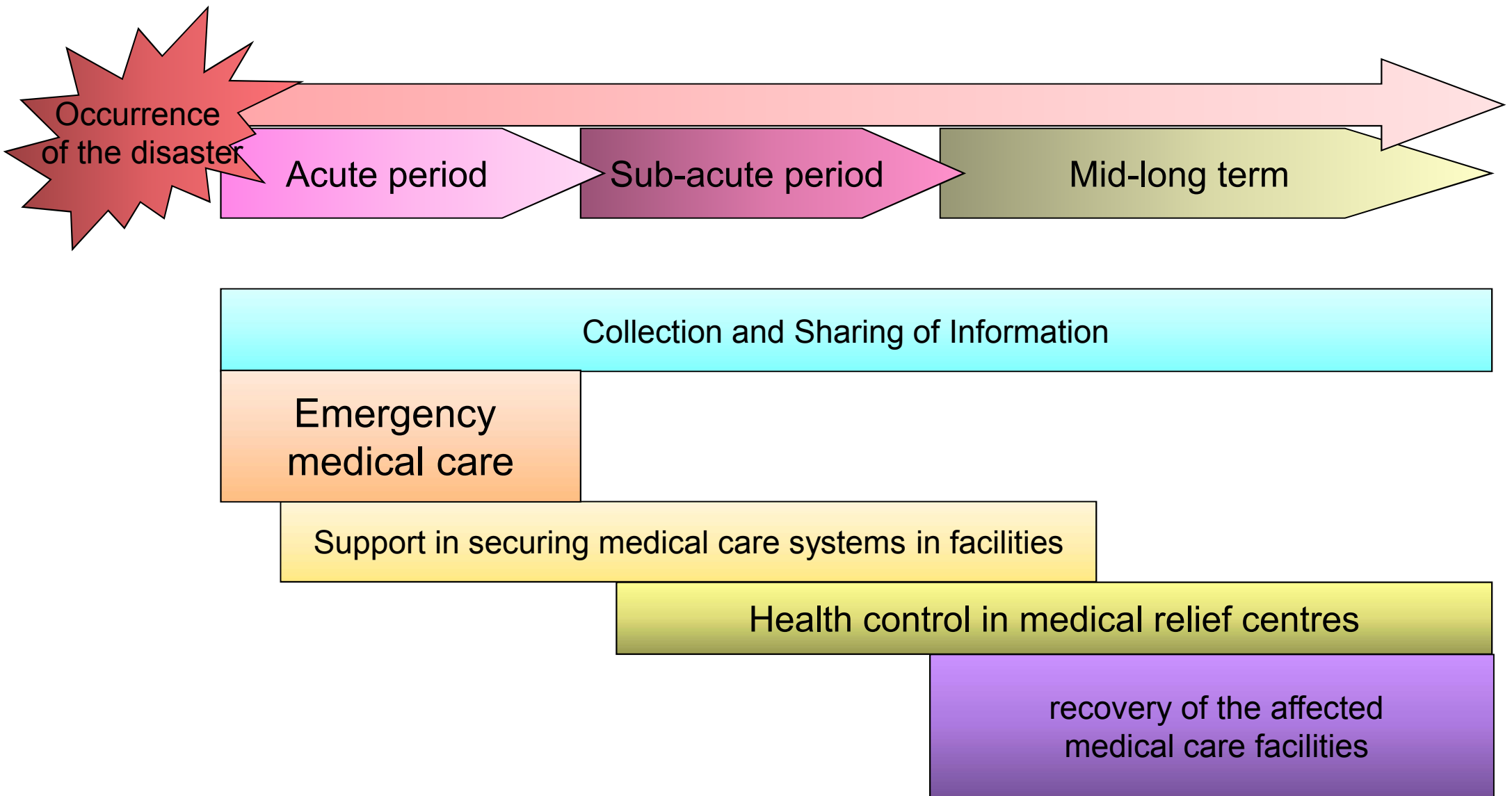
Damages of buildings	
Collapsed	127,213
Partially collapsed	232,489
Partially damaged	658,123

(National Police Agency, as of 11-Jan 2012)

Support for the affected people	
Evacuees (nation wide)	334,786

*Including those who sought shelter outside evacuation centres (houses of relatives, acquaintances, public housing, residents in temporary houses)

(Reconstruction Headquarters 10-Jan 2012)



March

April

May

June

Medicine materials

- Sent over-the-counter medicine and ethical (prescription) medicine (12 Mar-)

- Distributed blankets and drinking waters from Japan Consumers' Cooperative Union (13 Mar -)

- Sent medicine through helicopters of US military (19 Mar)

- Established supply system of medicine (established collection centres in each prefecture, and brought medicine)

- Sent over-the-counter medicine through patrol vessels of Japan Fisheries Association (20 Mar-)

- 44 tons of Ethical Medicine

- 4680 boxes, 150,000 bottles, 180,000 sheets of over the counter medicine



March

April

May

June

Medical Care

DMAT (11Mar -22Mar)
* Max 193teams were active (13 Mar)

The Coordination Council for Health Support for the Affected People (22 Apr-)

Deployment of medical care teams from medical care related organization such as JMAT (15 Mar) * Max 156 teams with 706 persons were active

Total of 12,280 persons (2,662 teams) were deployed

Deployment of mental/psychological care team (16 Mar-)

Total of 3,390 persons (57 teams) were deployed

Health related activities by nurses and public health nurses (14 Mar)

○transit to direct deployment

Total of 11,255 persons were deployed (excluding direct deployment)

Deployment of pharmacists (17 Mar-)

* Max 133 persons were active (10 Apr)

1915 persons

Deployment of dietitians (3/20~)

○checked food in all shelters in Miyagi twice

○Checked food in shelters in Iwate(10 May-) and Fukushima (20 Apr-)

Total of 600 dietitians were deployed

Summary of Japan DMAT activity

Number of DMATs: 380 teams, 1800 personnel

Active period: 3/11 ~ 3/22 (12 days)

Dispatched to:

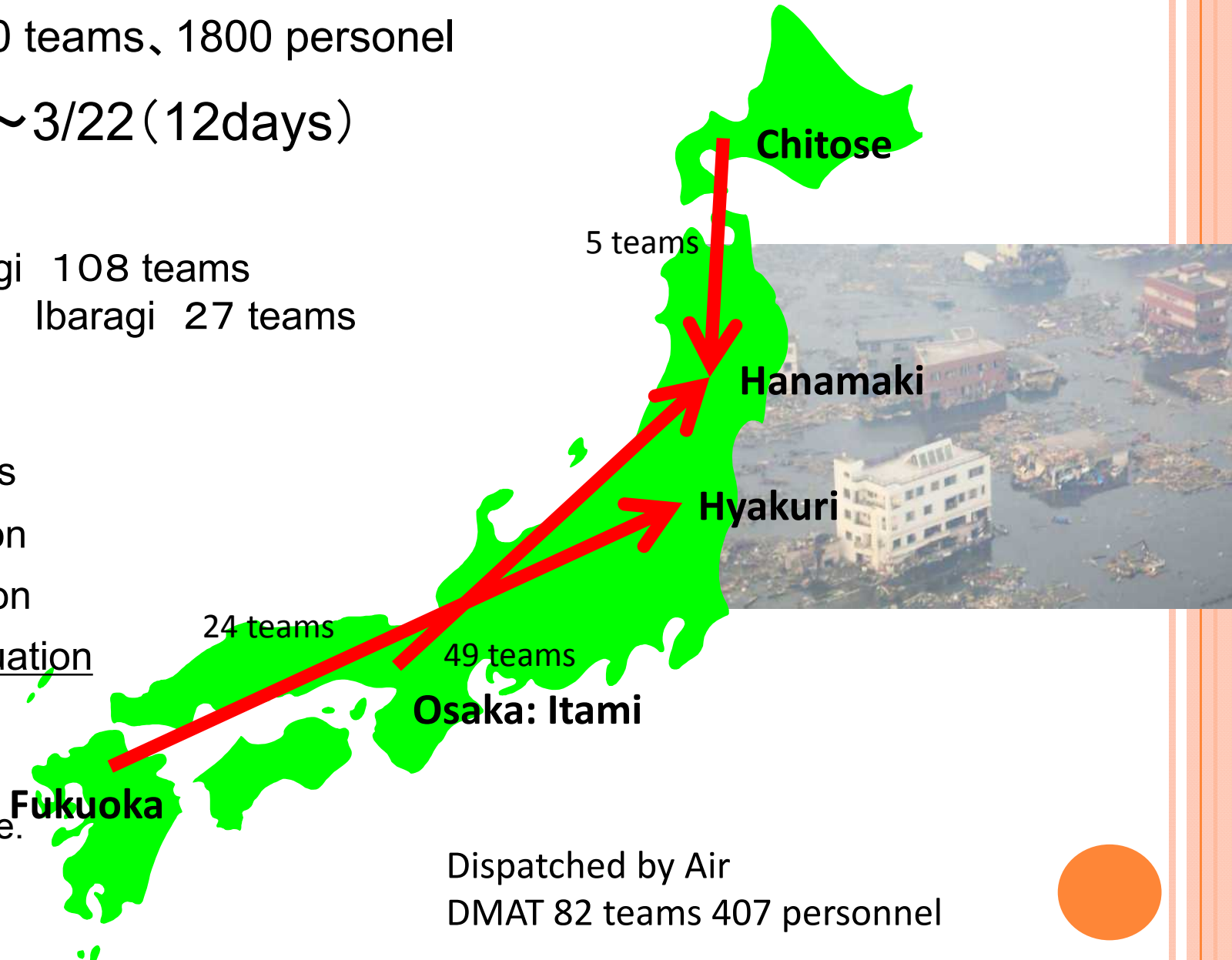
Iwate 94 teams, Miyagi 108 teams

Fukushima 44 teams, Ibaragi 27 teams

Activities:

- Support for hospitals
- Inpatients evacuation
- Regional evacuation
- Wide-area air evacuation

Transferred 19 pts
with 5 airplanes
of Self Defence Force.



Dispatched by Air
DMAT 82 teams 407 personnel

DMAT ACTIVITIES

Support Hospitals inside the affected area



Red area



Yellow area (electrical power down)





**Hanamaki Airport
Staging Care Unit**

Received 136 pts

- **Air evacuated 16 pts**
- **Transported to Morioka city 120 pts**



In the C-1 jet plane to Haneda AP



Receive patients from coastal area

Carry in the patients to the craft



THE DMAT SUPERVISORS WERE ALLOCATED IN EACH OF THE PREFECTURAL GOVERNMENTS' OFFICE



Miyagi Prefectural Office



Iwate Prefectural Office



Fukushima Prefectural Office



【DMAT】

●Content of activity

- Because of the enormous damages by tsunami, measures to chronic diseases are needed, though trauma care had been expected.

●Duration of activity

- Lack of supplies and materials due the activities lasting more than 48 hours.

●Communication systems

- Some teams had difficulty in communications, while others had no access to the Internet to encode Emergency Medical Information System (EMIS).

●Logistics, coordination and instruction

- DMAT office and DMAT coordination office in the prefectural level had the burden of increased administrative works because there were many DMATs active in the affected area.
 - Difficulty in understanding medical needs in community level

●Transfer of patients in region

- Collaboration among the related agencies for transfer of patients took time because there had been no existing plans.
- DMATs which flied to join the activity had difficulty in bringing supplies and materials sustaining themselves.

DMAT Activity Plan

【Pre-Eq: as of 31-Mar 2010】

【Post-Eq: as of 30 Mar 2012】

●Activity

- Based on JATEC (DMAT training program)

- In addition to JATEC, DMATS needs to respond to chronic diseases

●Duration

- Within 48 hours after the disaster

- 48 hours per team (excluding transportation time to the field)
- Deployment of 2nd and 3rd batch shall be considered in accordance with size of the disaster

●Communication

- Between the hospital of origin and the DMAT

- Secure more than two communication systems (i.e. using satellite cell phones)
- Secure internet accessibility

●Instruction

- DMAT medical facilities shall actively deploy members to DMAT coordination offices in the prefectural level

●Logistics

- Establishment of DMAT logistical support team and support for Registered DMAT Commanders.

●Participation through air

- Prefectures shall provide supplies and materials required for DMAT which flied to participate the activity

THE NEXT STEPS

- Enhance the command and control function
- Upgrade the telecommunication equipment
 - Available to connect to internet during a heavy congestion
- Brush-up the wide-area medical evacuation strategy
- Reinforce the logistic support function
 - Procurement of fuel, vehicles... in the affected area
 - Communication system

