

“Responding to the unusual on business as usual”

Disaster and Mass Casualty planning in New Zealand

Charles Blanch
Director Emergency Management
Ministry of Health

“The health sector successfully provided timely and high quality treatment for those injured in the earthquake, mostly because of the high level of preparedness based on exercises and previous activation in emergencies.”

*Independent Review of the Civil Defence Emergency
Management
Response to the 22 February Christchurch
Earthquake*

Content

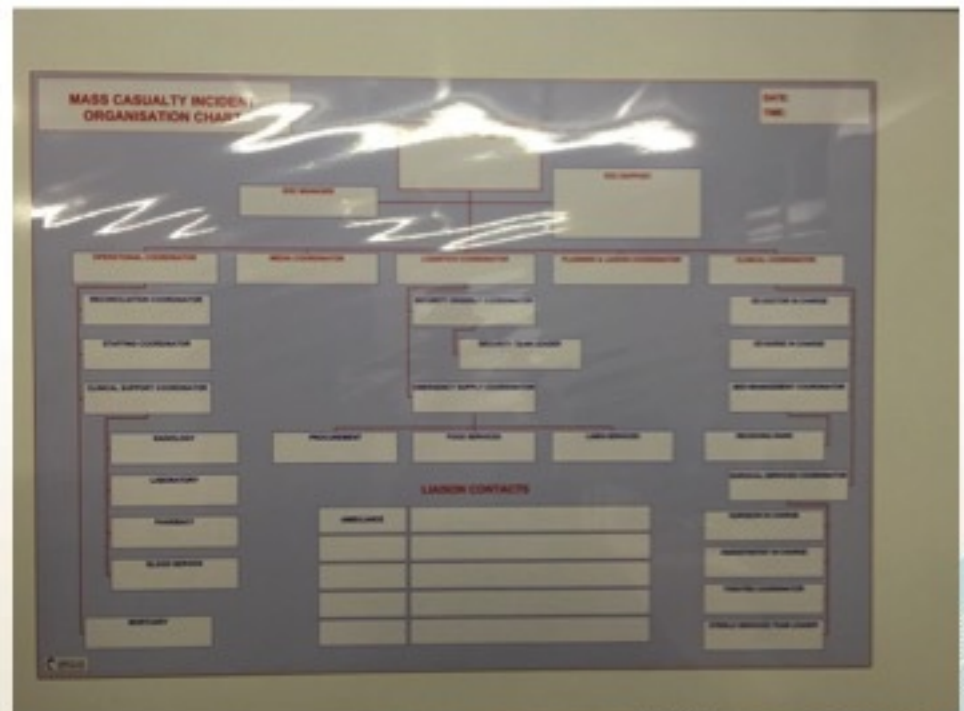
Roles and responsibility of
the sector

National hazards and
threats

Consequences of national
hazards

Reduction, Readiness,
Response and Recovery

What can you do?



What do we have to do?

The Ministry of Health

- Required to have a National Health Emergency Plan under the Civil Defence and Emergency Act
- Coordinates the health sector response to national emergencies

District Health Boards

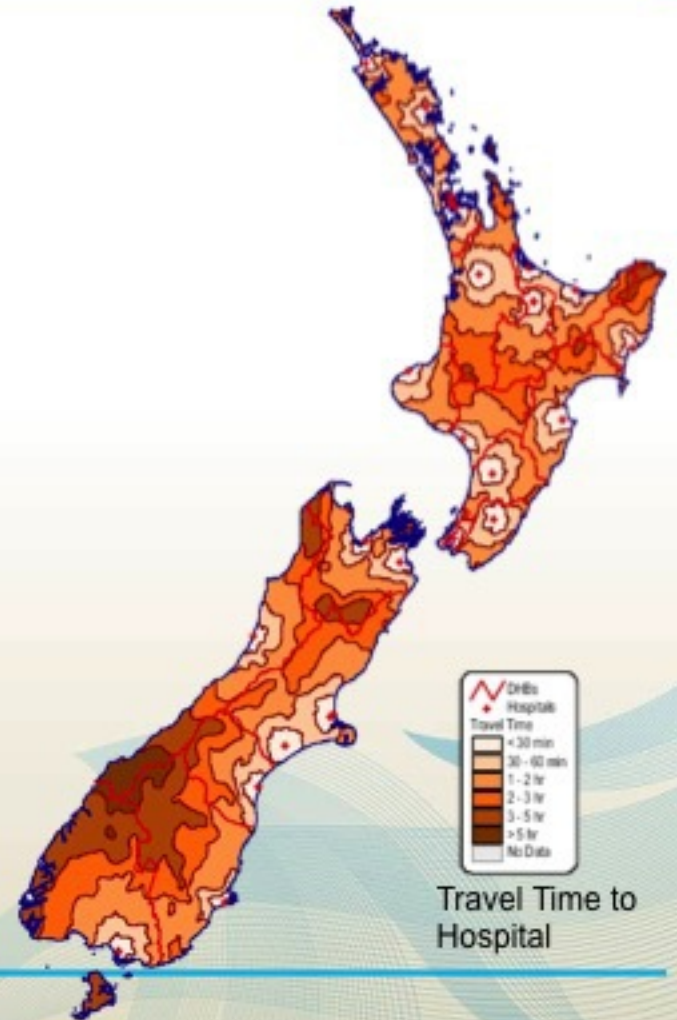
- Required to have a Major Incident and Emergency Plan under the Crown Funding Agreement
- Required to participate in national, regional, local emergency planning and exercising

Ambulance and local providers

- Required to have a plans to continue functioning to the fullest possible extent including surge capacity
-

Challenges for NZ emergency planning

- Low population density
- Dispersed secondary and tertiary hospitals
- Physical layout – poor transportation links
- Funding
- Supplies and resources
- System choke points
- International supply chain



Disadvantages of Health Emergency Planning in a small country

- Capital expenditure is limited
- High per capita costs – doesn't cost much more to plan for 40m than it does 4m
- Minimal surge capacity, low redundancy
- Issues of remoteness, rurality
- Supply chain issues – manufacturing capacity
- Less expertise available



Christchurch ED, 22 February 2010 earthquake,
Photo: Canterbury DHB

Advantages of Health Emergency Planning in a small country

- Far less political input
- Low bureaucracy in general
- Change can be fast
- Close-knit emergency planning and clinical community
- Low risk of terrorism-related events
- Focus on efficient systems – reduce inherent confusion as much as possible
- Must be innovative when it comes to contingency planning
- Collaboration (intra, inter-sectoral)



Photo: Patient evacuation into Wellington, Feb 2010
Ministry of Health

Hazards and threats to New Zealand

Natural Disasters

- earthquakes, volcanism, flooding, tsunami, weather events

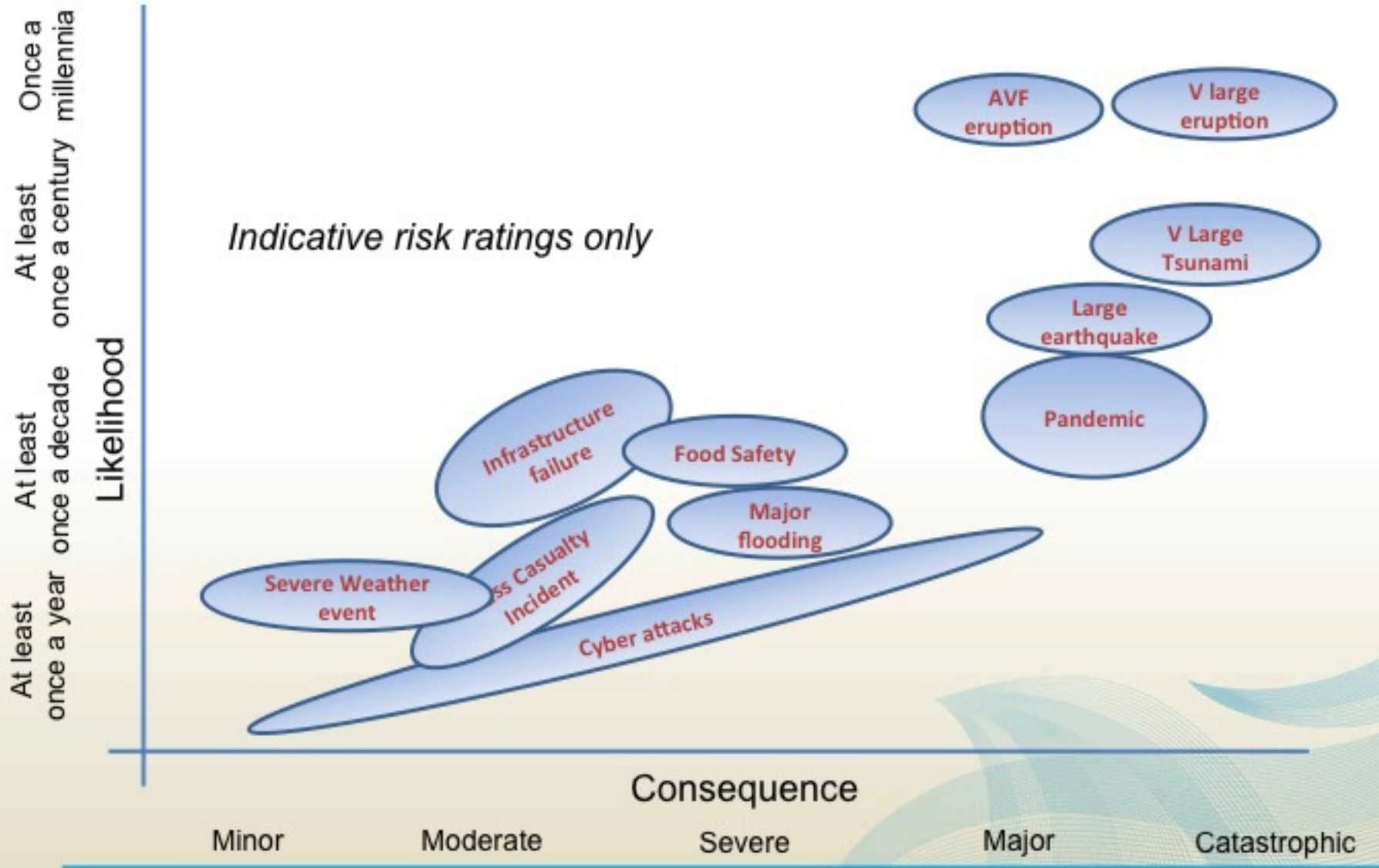
Technological

- transportation accidents, terrorism and malicious acts

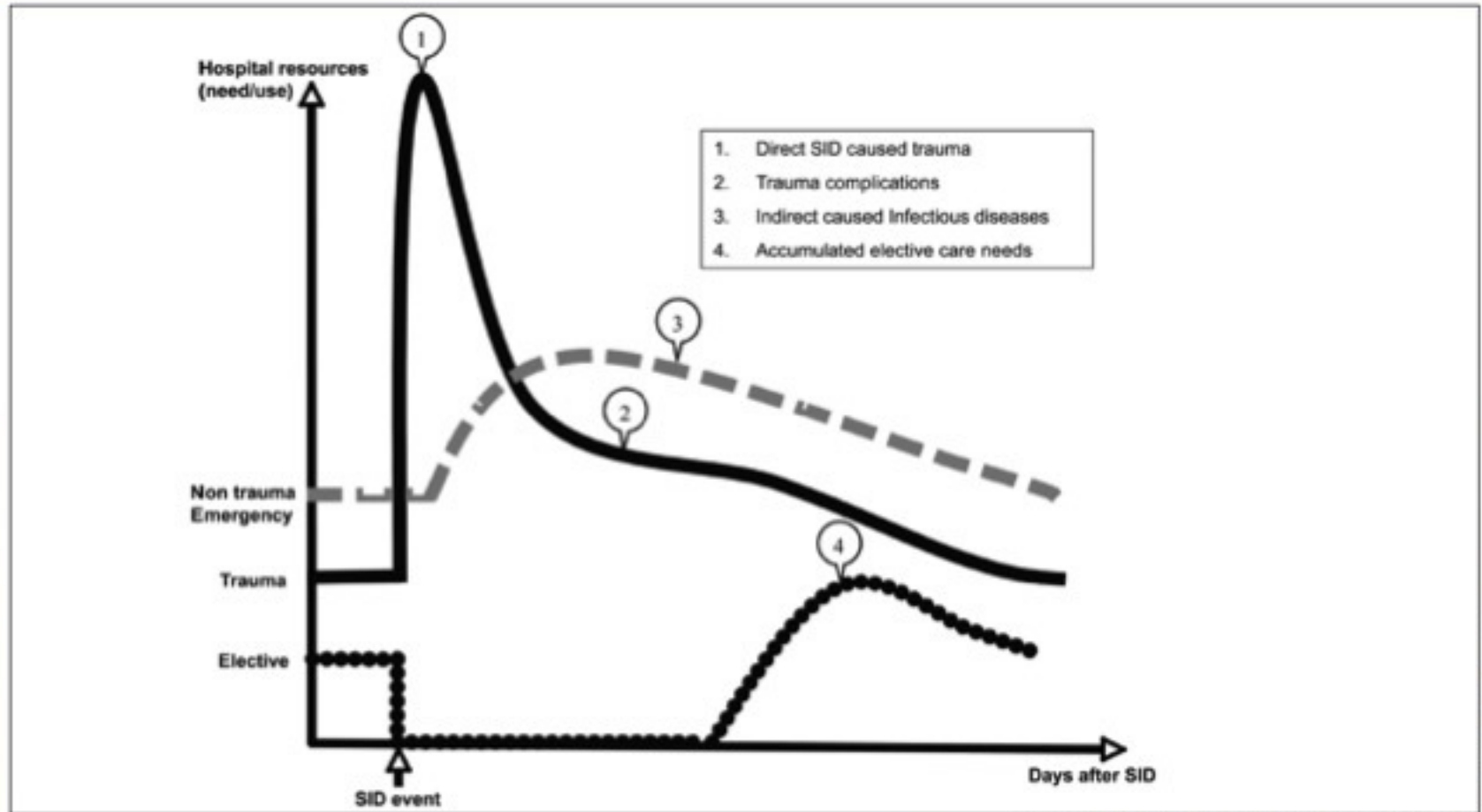
Health-related

- epidemics, pandemics, emerging infectious disease events





Burden of disease in Sudden Onset Disasters



Consequences

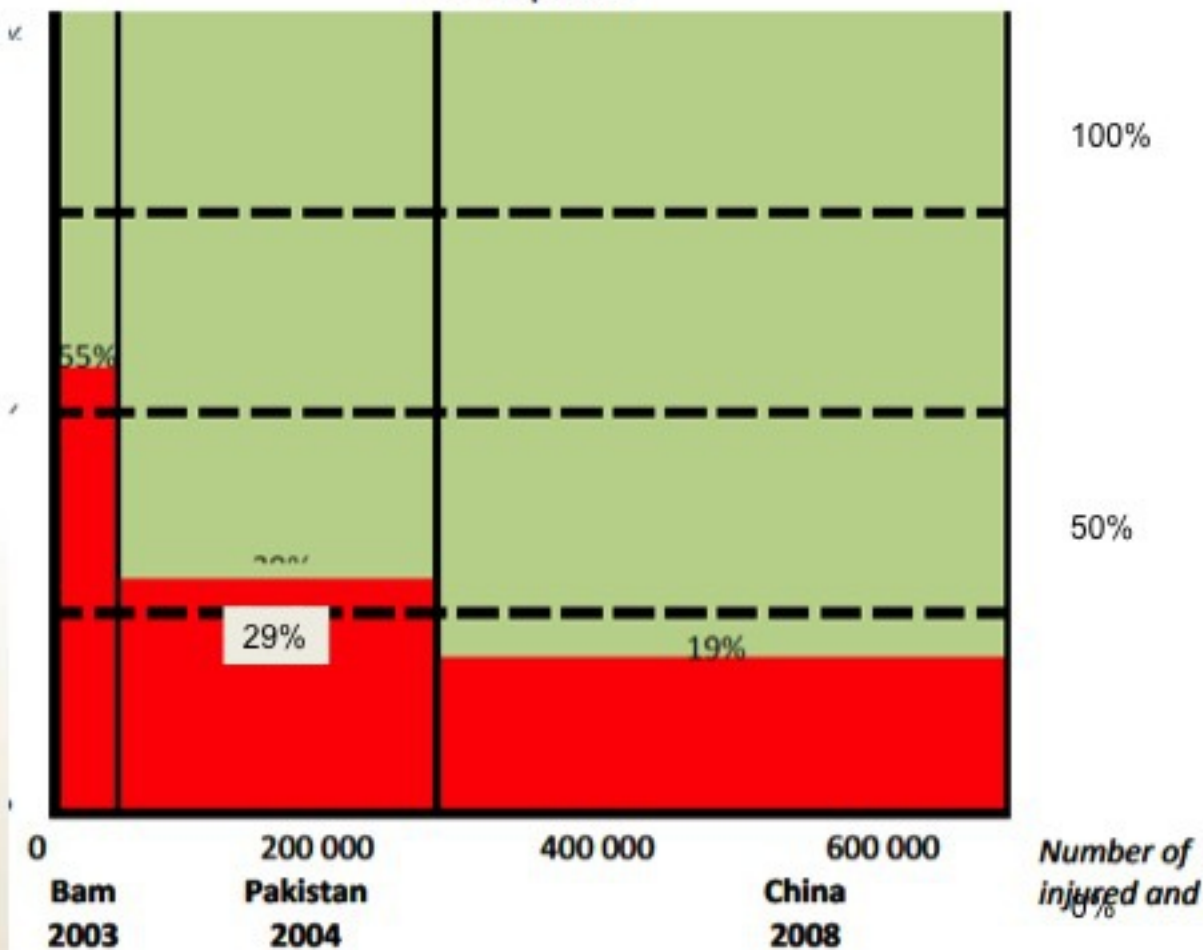
- Understand and anticipate the disaster epidemiology for your likely hazards
 - Staff may be affected directly or in-directly
 - Facility may be affected directly or indirectly through disruption to critical supplies and utilities
 - Self-presenters at non-receiving facilities and receiving facilities bypassing pre-hospital care
 - Primary and secondary presentations
 - Loss of regional or national services
 - Emerging vulnerable populations
 - Ongoing hazards or events (aftershocks)
-

Expected effects of Natural disaster

(PAHO. Natural Disaster: Protecting the public's health. Washington, DC:PAHO,2000)

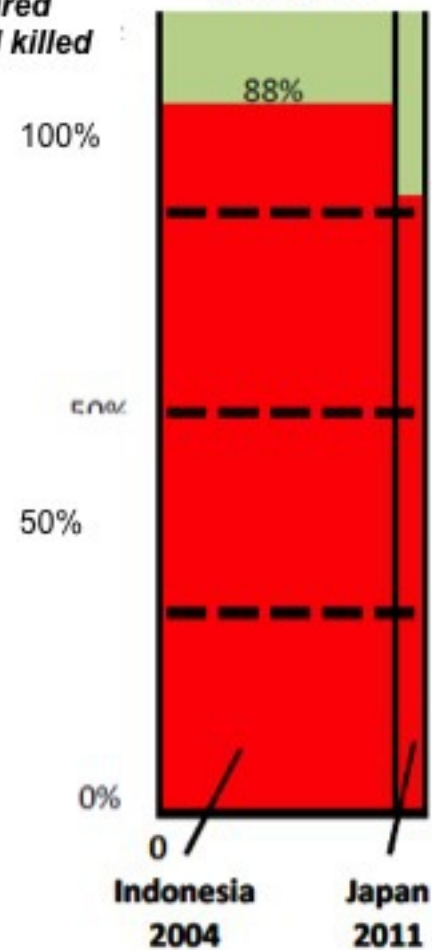
<i>Effect</i>	<i>Earthquakes</i>	<i>Strong Winds</i>	<i>Tsunamis and Flash floods</i>	<i>Ordinary Floods</i>	<i>Landslides</i>	<i>Volcanic and Lava Activity</i>
Loss of lives	<i>High</i>	<i>Low</i>	<i>High</i>	<i>Low</i>	<i>High</i>	<i>High</i>
Severe injuries requiring complex treatment	High	Moderate	Low	Low	Low	Low
Major risk of communicable diseases	<i>Potential risk following all significant phenomena (Likelihood increases with crowding and the degradation of sanitary conditions)</i>					
Damage to health facilities	<i>Severe (structure and equipment)</i>	<i>Severe</i>	<i>Severe but localized</i>	<i>Severe (equipment only)</i>	<i>Severe but localized</i>	<i>Severe (structure and equipment)</i>
Damage to water supply systems	<i>Severe</i>	<i>Light</i>	<i>Severe</i>	<i>Light</i>	<i>Severe but localized</i>	<i>Severe</i>
Food scarcity	<i>Infrequent (generally caused by economic or logistical factors)</i>		<i>Common</i>	<i>Common</i>	<i>Infrequent</i>	<i>Infrequent</i>
Large migrations	<i>Infrequent (common in severely affected urban areas)</i>		<i>Common (Generally limited)</i>			

Relationship between killed and injured in three recent earthquakes



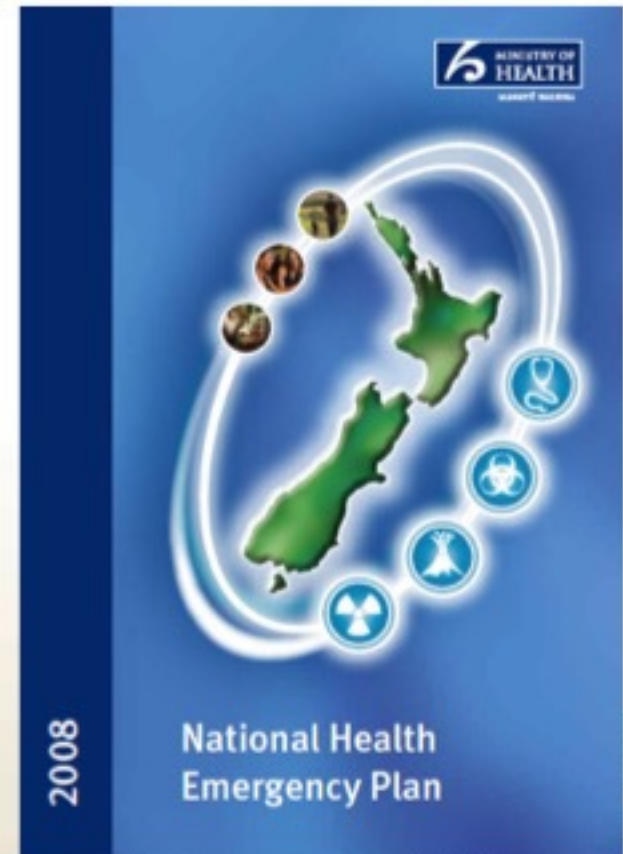
Relationship between killed and injured in two recent tsunamis

% of total
% of total
injured
and killed



National Health Emergency Plan

- Outlines structures of emergency management in NZ and Health sector role within it
- Structured around the four R's; Reduction, Readiness, Response and Recovery
- Operational responses utilise the Coordinated Incident management System
- Requires a Single Point of Contact with each DHB
- NHEP Integrated with Regional and DHB Health Emergency Plans – Aligns with Operational Planning Framework

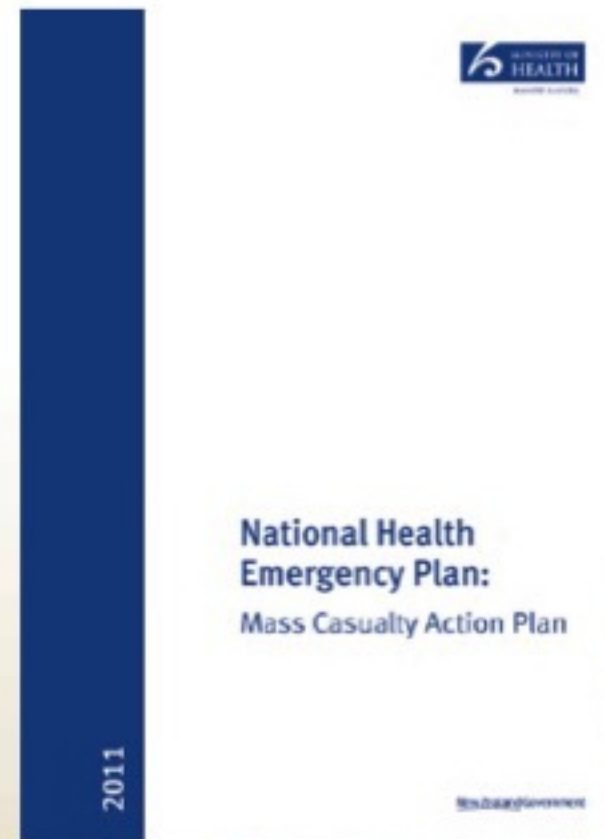


NHEP Mass Casualty Action Plan

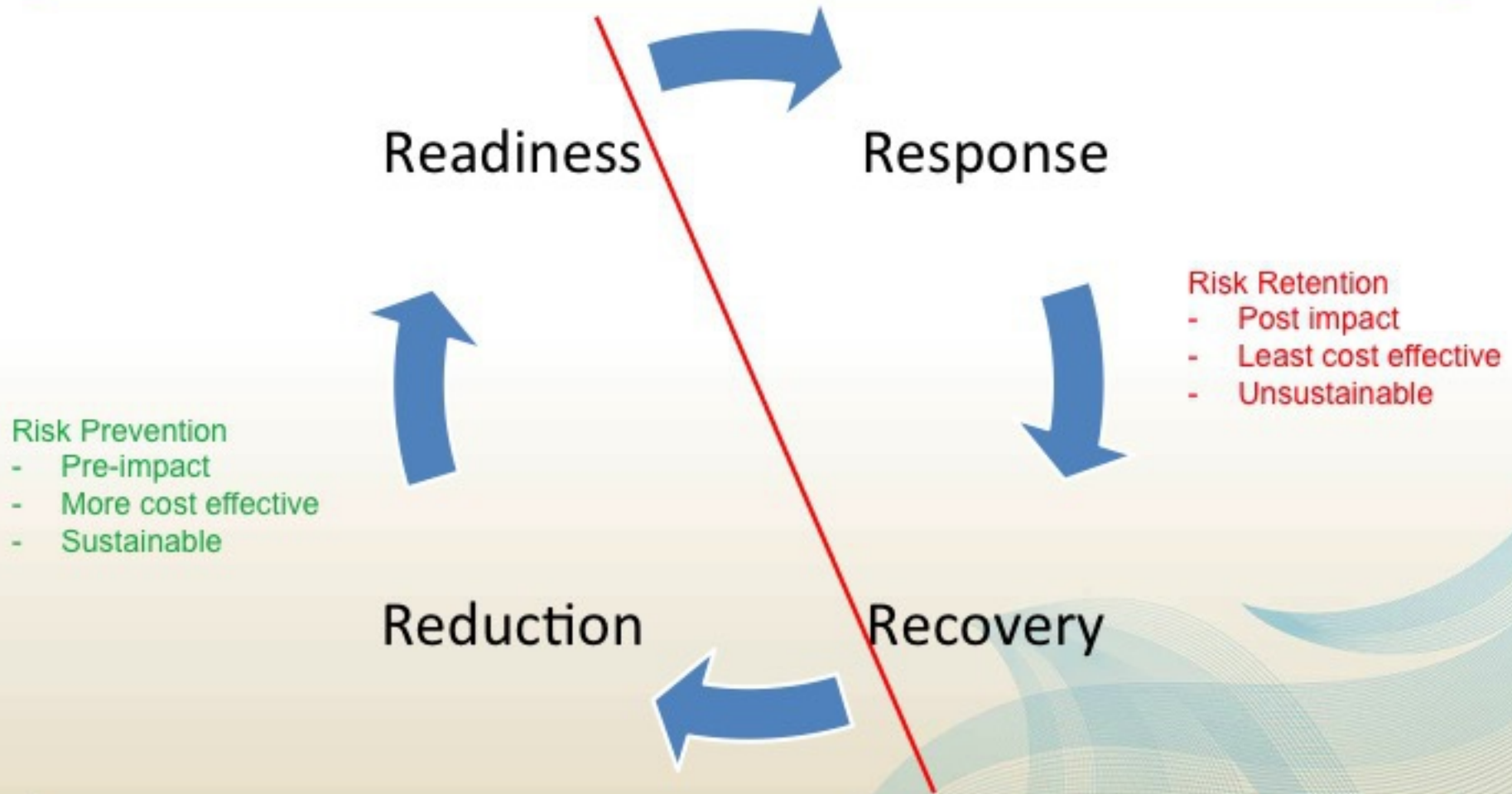
Mass Casualty Action Plan and
Multiple Complex Burns Plan
developed as part of RWC2011
readiness

Describes **No notice** and **Rising tide
incidents**

Expects DHBs and Ambulance to
have plans...active measures to
supplement max bed capacity in
acute facilities...integrated
response inc. primary care



Disaster cycle



Considerations for all facilities

- Appropriate trauma kits
- Portable scene lighting
- Alternative power
- VHF radio linked to DHB Network
- Headtorches and batteries
- PPE such as Wet Weather gear to allow staff top triage outside
- Colour coded MCI vests
- Loudhailers, signage and barriers to guide public self presenters
- Appropriate number of pre-allocated emergency numbers/ NHIs
- Basic DIY/Hardware kit



Considerations for Emergency Departments

- Exercising an MCI response
- Air shelter or tentage to establish triage/sieve facility outside the ED
- What's your business continuity plan if the department is impacted by the event?
- What are the transfer plans for patients who self-present at non receiving facilities?



FOREIGN MEDICAL TEAMS

- WHO initiative developed post Haiti; inappropriate, unregistered, unqualified responses
- Minimum and Technical standards for trauma and surgical response to Sudden Onset Disaster
- Standards and registration used Typhoon Haiyan and Cyclone Pam
- Requested to deploy to EVD acute public health emergency



**CLASSIFICATION AND
MINIMUM STANDARDS
FOR FOREIGN MEDICAL
TEAMS IN SUDDEN ONSET
DISASTERS**



Global FMT Advisory NETWORK

- Registration
- Verification
- Coordination virtually and in the field
- Technical Standards
- Capability enhancement



NEPAL EARTHQUAKE

- Grade 3 WHO Emergency
- 63 FMT deployed
- 39 on standby
- 12 person FMT coordination
- WHO HQ and Region
- UNDAC
- MSF Belgium



VANUATU CYCLONE PAM

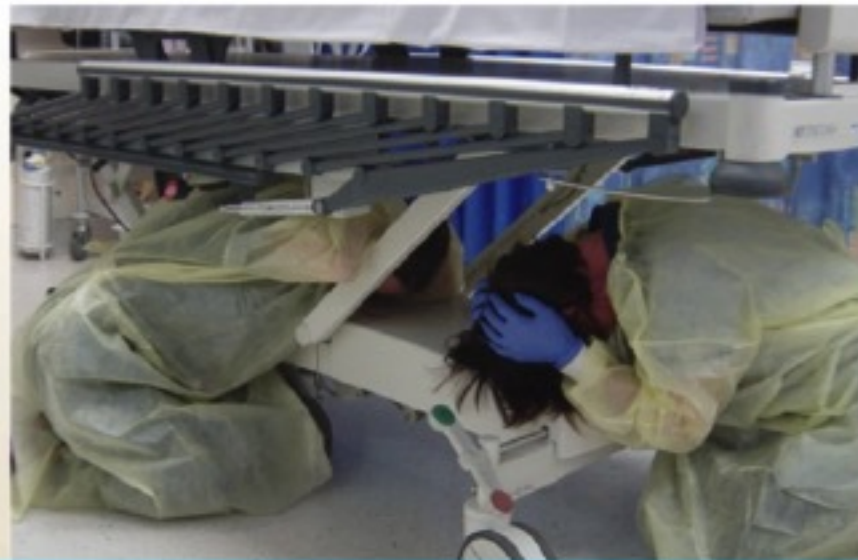
- 24 FMTs inc NZMAT
- c. 1000 consults
- Unique coordination challenges across Pacific Island Countries
- 3 person FMT coord cell (AUSMAT/NZMAT trained)
- Senior Vanuatuan staff leading the Health Cluster: AUSMAT & NZMAT trained



Get ready for the big



shakeout.govt.nz



To finish

Do I have a personal and family emergency plan?

Do I know my role in my departments emergency plan?

Could I support other services?

Do I know what to do off duty and on duty?

What's my role within the community?

Some resources

- **The initial health-system response to the earthquake in Christchurch, New Zealand, in February, 2011** Ardagh, Michael W et al. The Lancet , Volume 379 , Issue 9831 , 2109 – 2115
- National Health Emergency Plans available at www.health.govt.nz
- DHB plans on your intranet

[Director Emergency Management](#)

Charles_blanch@moh.govt.nz

