

Communicating for Heat Action

Perspectives on Communicating Risk from a Doctor

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Hong Kong Jockey Club Disaster Preparedness and Response Institute
/
World Association of Family Doctors



Mild and Moderate Heat Illnesses

Heat rash

Heat edema

Heat cramps

Heat syncope

Heat Exhaustion / Heat Stroke

- Heat Exhaustion

- giddiness
- headache
- nausea
- shortness of breath
- mental confusion

- Heat Stroke

- body temp > 41
- convulsion
- unconscious
- rhabdomyolysis
- multiorgan failure



Who is at Risk?

- The obese
- The sick
- The elderly
 - The psychiatric patients
- The children
 - The socially isolated

Recommendations for the Public

Keep your home cool

Keep out of heat

Keep the body cool and hydrated

Help others

If you have a health problem...

If you or other feel unwell...

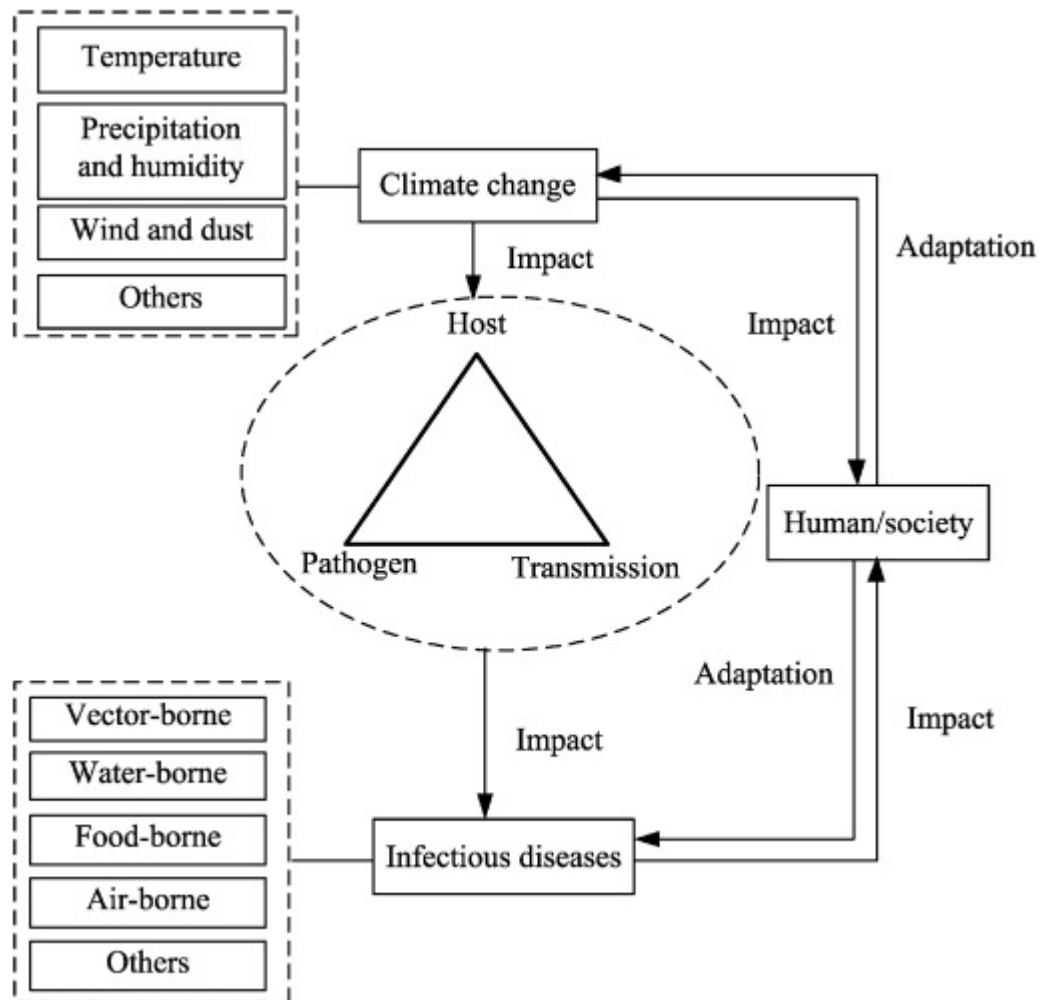
Recommendations for the Family Physicians

- Understand thermoregulatory and haemodynamic response to heat
- Understand heat illnesses esp heat stroke
- Initiate proper cooling and resuscitation
- Identify vulnerable groups and encourage proper education and counselling
- Beware of side effects / efficacy of medications during hot weather
- Monitor drug therapy and fluid intake

Heat Action Plan: Key Perspectives

- Accurate and timely alert system
 - Heat related health information plan: what, who and when
 - Particular care to vulnerable groups
 - Preparedness of health and social care system
 - Reduction in indoor heat exposure
 - Real time surveillance and evaluation
-
- Agreement on a lead body
 - Long term urban planning

Resurgence of Infectious Diseases



climate change and pathogens
climate change and hosts / vectors
climate change and transmission

dengue, malaria, hantavirus and cholera,
salmonellosis, giardiasis

seasonal / geographical distribution
outbreak frequency and severity

Key studies that assess the relationship between extreme weather events and infectious diseases.^a

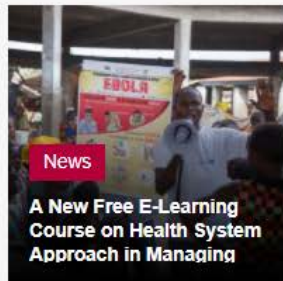
Extreme weather events	Disease type	Authors, year	Main findings
El Nino	Vector-borne disease	Epstein (1999) Haines and Patz (2004)	Increasing outbreaks of emerging diseases were linked to El Nino event. Outbreaks and epidemic of malaria were positively connected with El Nino events in many regions.
		Lindsay et al. (2000) Hjelle and Glass (2000)	Strikingly less malaria were found in the El Nino year than in the preceding year in the Usambara Mountains, Tanzania. Record of hantavirus cardiopulmonary syndrome has been found to be related to El Nino events in the Colorado Plateau.
La Nina	Water-borne disease	Dwight et al. (2004)	The risk of symptoms associated with diarrhea is twice the previous when exposed to southern California coastal waters during an El Nino winter.
	Vector-borne disease	Chretien et al. (2007) Nicholls (1993)	Chikungunya fever epidemic was connected with the drought incurred by La Nina. La Nina year produced an epidemic of West Nile fever and Japanese encephalitis.
Quasi-Biennial Oscillation (QBO)	Water-borne disease	Bunyavanich et al. (2003)	Risk increased across diarrhea symptom during a La Nina winter.
	Vector-borne disease	Dwight et al. (2004)	QBO has been found to be linked to the incidence of Ross River virus in south-eastern Queensland.
Heatwaves	Vector-borne disease	Paz (2006)	Heatwave was associated with outbreak of West Nile fever in Israel in 2000.
	Air-borne disease	Kan (2011)	Heatwave contributes to the increased morbidity and mortality from infectious respiratory diseases.
Drought	Water-borne disease	Epstein (2001a)	Diarrheal diseases are frequent during drought especially in refugee camps.
	Vector-borne disease	Khasnis and Nettleman (2005) Wang et al. (2010) Shaman et al. (2002)	Drought has been found to be associated with hantavirus pulmonary syndrome (HPS). Increased West Nile virus risks follow the drought. The risk for transmission of St. Louis Encephalitis virus would increase, during the droughts.
Flood	Water-borne disease	Chretien et al. (2007) MacKenzie et al. (1994) Reacher et al. (2004)	The Chikungunya fever epidemic may be associated with droughts. Flood favors water-borne disease transmission such as <i>Cryptosporidium</i> infection. A significant increase in risk of gastroenteritis was associated with depth of flooding in the town of Lewes in Southern England.
	Vector-borne disease	Epstein (1999) Mackenzie et al. (2000) Ahern et al. (2005) Woodruff et al. (1990) Nielsen et al. (2002) Cordova et al. (2000) Chen (1999) CDC (2000) Leal-Castellanos et al. (2003)	Floods in Mozambique led to spread of malaria, typhoid and cholera Strong rain or flood can lead to outbreak of Ross River fever After a flood, such diarrheal disease cases as cholera may grow Increases in diarrhea and malaria incidences were observed after floods in 1988 in Khartoum, Sudan. There have been reported increases in lymphatic filariasis in different areas. There have also been reported increases in arbovirus disease after flood Hemorrhagic Fever with Renal Syndrome diseases may increase during flooding HPS diseases may also increase during flooding Leptospirosis diseases may also increase during flooding in different areas.
Hurricane Cyclone	Vector-borne disease	Epstein (2000)	Following the hurricane, malaria and dengue fever occurred in Honduras and in Venezuela.
	Vector-borne disease Water/food-borne disease	Sanders et al. (1999) Shultz et al. (2005)	A cyclone tends to increase the incidence of leptospirosis. A cyclone tends to increase the incidence of cholera.

^a The table includes empirical findings published after the 1990s.

HKJC DPRI

Hong Kong Jockey Club Disaster Preparedness and
Response Institute

<http://www.hkjcdpri.org.hk/>



WE ADAPT INTERNATIONAL NORMS AND LESSONS LEARNT TO MEET LOCAL NEEDS.

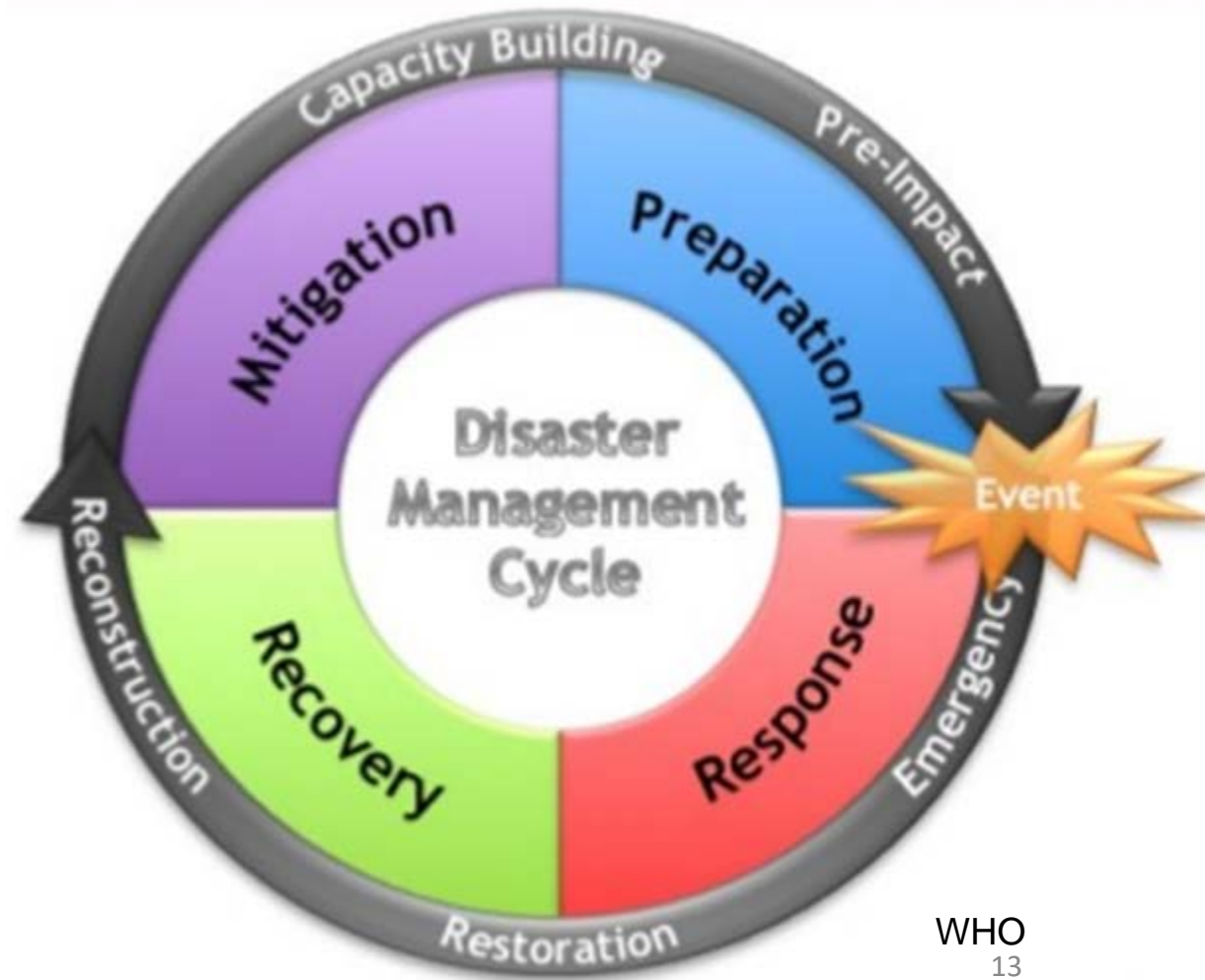
HKJC DPRI: The Hong Kong Jockey Club Disaster Preparedness and Response Institute

- setup in 2014, funded by HKJC
- capacity building on disaster preparedness and response
- participatory, collaborative
- locally, regionally and globally
- policy, research and practice

HKU, CUHK, UST, Manchester Uni,
Harvard Uni

Mainland China

WHO



Hong Kong's Emergency and Disaster Response System

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Policy Brief

October 2015



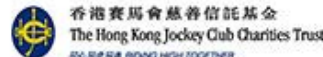
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Policy Implication of Health Impacts of Climate Change in Hong Kong

Policy Brief

October 2016

Emily YY CHAN, Heidi HUNG, Gabriel NC LAU, Edward YY NG

Collaborating Centre for Oxford University and CUHK for Disaster and Medical
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 齊心齊力 齊高齊強 TOGETHER

Landslide

Smart Landslide Barrier



Smart Landslide Information System



(a)
Figure 1. Global interface of LIS mobile app on smartphone

氣候變化下的
大澳 社區防災應變能力初探



大澳防水災意識提升計劃

「大澳居民對氣候變化影響的認識及危機意識」調查

2016年8月

「全球氣候變化與我何干」
流動街展

2016年9-10月

「防災意識 集思廣益」
講座

2016年10月(時間/地點待定)

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Thank You